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W.A. FRUITGROWERS' CONFERENCE

Retaining Overseas Markets

AT the annual conference of the Western Australian Fruitgrowers' Association, which opened at Bunbury on August 25, Mr. J. McNeil Martin presided over an attendance of sixty delegates representing all the principal fruitgrowing areas of the State. Included among the visitors were the Minister for Works (Mr. Millington), Senator Clothier, Mr. J. H. Prowse, M.H.R., Messrs. L. J. Hill and F. W. Withers, M's.L.A., and the Superintendent of Horticulture (Mr. G. W. Wickens).

In opening the conference, Mr. Milington referred to the importance of the fruitgrowing industry to the State. He said that the high esteem in which W.A. Granny Smith Apples were held in the trade meant a price difference of 2/- a case over those obtaining in the Eastern States. The export of Grapes last year reached the record figure of 72,000 cases, and of these 53,000 cases were shipped to Ceylon, Singapore and Java. In view of those important markets, which were likely to be closed to West Australian growers on account of fruit fly regulations, it was decided that the Minister for Agriculture (Mr. Wise) should visit those countries in an endeavor to keep those markets open. Nevertheless, any attempt to clean up the fruit fly pest could not be taken too seriously. The codling moth had been successfully combated in this State, and having that in mind he believed that with organisation and the co-operation of growers, the Department of Agriculture and the Government, fruit fly could be wiped out. With extra inspections of orchards, considerable improvements had been effected in the Upper Swan and Donnybrook districts, and this improvement should be maintained throughout the State. When there was a danger of losing markets one had to be very careful with regulations and the industry should do all in its power to keep fruit fly and other pests in check. He promised sympathetic consideration of any matters brought before him.

Allocation of Quotas.

Short addresses were also given by other Parliamentary representatives, and after a vote of thanks to the Minister had been moved by the Vice-President of the Association (Mr. W. P. Scott), delegates were tendered a civic reception by the Mayor (Mr. J. E. Hands) and councillors of Bunbury.

When the conference was resumed, Mr. McNeil Martin, in his opening address, referred to the Federal Apple and Pear Control Bill and traced the history of the negotiations with the Federal Government. A meeting of the Fruit Organisations Board, he said, had evolved a scheme of quota allocations to growers in the event of a quota being applied, and this scheme would be submitted to conference. Alterations had been made to the local marketing regulations and in future retailers would also have to conform to the regulations and sell according to grade.

Reports from the executive, the Northern District Council and the Fruit Fly Advisory Board were read and adopted, after which there was a short session on the actual business of the agenda. A motion from the Albany delegates that shippers be requested to revert to the practice of putting the grower's name on fruit cases instead of the registered number was lost after an explanation had been tendered by Messrs. R. M. Carter (Fruit Shippers' Committee) and H. W. Soothill.

Mr. Carter stated that the alteration had been made because of pressure from overseas buyers. The trade had developed to such an extent that the identity of the individual was completely lost, but the identity of the State had grown. Numbers made for long lines of fruit, which the trade desired.

Conformation to Regulations.

Mr. Soothill said that in London all our fruit was known only as West Australian fruit and sold as such. Any grower or shipper, therefore, who did not conform to the regulations as regards pack and presentation, was doing the whole industry a very serious injury. The idea that the grower's name on a case gave him greater publicity did not carry any weight with overseas buyers.

In referring to the unsatisfactory condition in which Pears arrived on the London market, Mr. R. W. Scott (Bridgetown), said that he considered one of the causes was the type of railway truck used, together with the delay in loading. He quoted figures to show that conditions were getting worse rather than better, and that some boats carried Pears much better than others.

On the chairman's suggestion the following motion was carried:—"That the unsatisfactory condition of Pears on arrival in London last season be referred to the executive for attention, and that the Government Railways be requested to ensure a sufficiency of insulated trucks adequate to cater for movement of pre-cooled Pears to ports for shipment."

The Mt. Barker delegates successfully moved that the question of oil bunkering facilities at Albany be dealt with by the incoming executive. —("West Australian")

THIRD PARTY INSURANCE.

Company May Go Into Liquidation.

In view of the fact that the Victorian Government has been making inquiries in New Zealand regarding the working of the New Zealand third party insurance scheme, and may be guided by the results achieved in the Dominion, it may be interesting to note that the directors of the Public Mutual Insurance Company of N.Z. are recommending that the company go into voluntary liquidation.

The directors attribute the company's financial position primarily to heavy claims under the third party motor vehicle risks.

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News of the Month

WAR CLOUDS.

At the moment of writing there is hope that a European conflict will be averted. A few days earlier hope had almost been abandoned. The situation is still full of danger, and by the time these lines are being read an entirely new set of conditions may be operating. The dignity and firmness with which the British attitude has been expressed must surely be a stabilising factor in a hysterical world. The average man and woman asks what is the good of war, with all its hideous accompaniments, and the prospects of further wars to clear up the entanglements of the preceding one. Maybe if peace can be assured now wiser counsels will prevail in the operation of a system by which international problems can be settled by negotiation. Let us proclaim our faith in the League of Nations which is in a position to deal with international disputes and in addition has a Social Investigation Bureau which can investigate and make known the clear facts of the social and economic conditions in the several countries and thus help to usher in better conditions in this fertile and productive world, but in which distribution still remains unsatisfactory; thus will the causes of war be removed.

OTTAWA AGREEMENTS.

The fruit industry is still awaiting information from the official delegation regarding the revision, if any, of the Ottawa Agreements. Statements appearing in the Canadian press indicate certain changes, but in the absence of official advice forecasts are of little value. At the welcome home attended to Mr. W. Young, this delegate (representing the canned fruits industry) was unable to give his hearers any information on the subject of treaty revision. This is quite to be understood, of course, in the absence of any official pronouncement.

It is evident, however, from enquiries from the several sections of the fruit industry, that this subject of British preference and its interrelation with U.S.A. is of deep concern.

It is realised that many factors have entered into the tri-angular negotiations, matters of national and international significance. However, each section of industry has its own importance in our national economic system, and the details affecting the same are of vital concern to those engaged in the business, hence the understandable desire for vital information to be made known, and when consideration can be given to such new adjustments as may be necessary.

PERSONAL.

Mr. Laurie S. Taylor, manager of the Tamar Valley Co-op. Co. Ltd., a member of the Tasmanian State Fruit Board, and ex-Vice-President of the Australian Apple and Pear Council, left for England on the S.S. "Jervis Bay" at the end of September. Mr. Taylor will enquire into various phases of fruit marketing in England.

Mr. J. W. Barker, of Barker, Green, and Parke, Melbourne, has just returned from a visit to England and the Continent.

FRUITGROWERS' FIELD DAY.

Vermont (Vic.), October 6.

An exceedingly interesting programme of reworking fruit trees, orchard machinery demonstrations and addresses on subjects of interest to fruitgrowers has been prepared for the Field Day at Mr. F. G. Beet's orchard, Railway-road, Vermont, Victoria, on October 6.

This is the largest Field Day of its kind in Victoria

APPLE AND PEAR COUNCIL.

From the annual report of the Australian Apple and Pear Council (a summary of which appears in this issue) and the agenda paper, it will be seen that the forthcoming Sydney conference in early October will face decisions of far-reaching importance. The industry has been well served by this Council, both in relation to exports and the leadership provided for developing the Australian markets.

Among other items, consideration will be given to the Bill of Lading Clauses, especially in view of the double freight now demanded when the propelling machinery of a fruit carrying steamer broke down and the fruit had to be transferred to another vessel. Also there will be the question of insurance against such a risk in future.

The importance of educational publicity for increasing the consumption of Apples and Pears is now recognised. Good results have followed from the efforts so far, and it is evident that by continuing the work, the whole tone of the industry can be improved. It is not going too far to say that this matter of educational publicity is the most important subject in front of the industry to-day. There still remains the problem of raising the needed finance. However, when it is remembered that for a comparatively small sum it is possible to stabilise the industry, surely the method will be found for this vital service.

News in Brief

The annual conference of the Australian Apple and Pear Council will begin in Sydney on October 10.

While on a visit to Yackandandah, the Chief Orchard Supervisor, Mr. C. F. Cole, expressed surprise at the decline of fruit growing, which he considered was due to a change in the variety of Apples now required for the export and interstate trade. Suitable kinds should be planted under up-to-date methods, and a cool store was badly needed at Stanley.

Sir Earle Page, who has been attending important trade conferences overseas, has returned to Australia impressed with the three main objectives emerging from the negotiations overseas. These, he says, are (1) Strengthening of Australia's military defences in proportion to the present population and resources; (2) Encouraging increased population; (3) Ensuring that markets would be available for the goods produced by the additional population.

The latest crop and market report issued by the U.S.A. Department of Agriculture states that the total production of the major deciduous fruits is considerably below that of 1937, but is slightly above the average. A very light crop of Apples is expected this year following the bumper crop of 1937. For citrus fruits indications point to an unusually large crop of Grapefruit and to large crops of Oranges and Lemons.

The M.I.A. and district crop of Valencias is considered to be lighter than last year, but other Victorian and most of the N.S.W. citrus districts report heavy crops, with small fruit predominating.

The V.C.C.A. has arranged the sale of a large quantity of Valencias to New Zealand during October. The price obtained is considered satisfactory in view of the fact that this fruit will relieve the local market of some pressure.

Fifty Nairoli (Kenya) parasites, specially imported by the N.S.W. Agricultural Department to destroy the white wax scale on citrus trees, were landed at Rose Bay recently from an Empire flying-boat. The insects were taken charge of by the Government's entomologist, by whom extensive experiments will be carried out before they are released.

A check made by the Graziers' Co-operative Shearing Co. Ltd. from 54 sheds in the north and north-west of N.S.W. shows a shortage of 17.6 per cent. in the wool shorn compared with that of last season.

More stationary spray plants are being installed in Tasmania, their efficiency and economy having been recognised.

Tasmanian cider won two first prizes and one third at the Melbourne Royal Agricultural Show.

Because of the heavy reworking of Apple varieties to Granny Smith, our Tasmanian correspondent sounds a note of warning as to over-supply in the near future.

The Phillips Cling Peach (Byrne's strain), and Golden Queen, have been planted on the Murrumbidgee Irrigation Area in preference to Pullar's Cling.

N.S.W. citrus growers have expressed alarm at reports that substantial quantities of Oranges are arriving from Palestine this summer.

In Tasmania, Apples are shaping for a good crop, Jonathans outstanding, Cleo., Scarlet and Crofton variable.

There was satisfactory blossoming of Apricots, Peaches and Nectarines in the Murrumbidgee Irrigation Areas.

In reworking trees in Tasmania, the new Apple varieties are mainly Granny Smith, with Delicious a favorite in some localities; Pears, Packham's Triumph and Winter Cole.

Appreciation is expressed in Tasmania for the vigorous action of the Tasmanian Dept. of Agriculture in destroying abandoned and neglected orchards.

An important contribution on the relationship of nitrates to soil fertility is made in the Mid-Murray Notes appearing in this issue.

Contrary to expectations of a light crop following the bumper yield of dried vine fruits last season, budbursts in the principal areas in Victoria and South Australia point to another heavy crop in the coming season.

Very little damage was done to dried vine fruit crops by the frost early last month in the Mildura district. Organised smoking was given a thorough test, and the whole area from Red Cliffs through Mildura to Merbein was effectively "blanketted." The main damage was at Coomealla, where precautions were not so thorough, but even there little harm was done.

Mr. W. Young, who represented the Northern Victorian fruitgrowers on the trade delegation overseas, was given a cordial welcome by growers and representative townspeople on his return to Shepparton. Mr. Young has done yoeman service for the industry, and speakers at the reception expressed high appreciation of his work.

Grave alarm is felt in many areas at the very low state of water storages in Victoria and New South Wales. It is many years since supplies have been so low, and the great expansion of irrigation during recent years has created a serious problem both for growers and water supply authorities now that an abnormally dry period has tested the supply. More storages appear to be the only solution if the interests of water users is to be adequately safeguarded.

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LETTER TO THE EDITOR

WINE GRAPE PLANTING.

(To the Editor, "Fruit World.")

Dear Sir,—

Recently the Australian Wine Board circularised growers urging them to refrain from planting further areas with wine Grapes owing to the over-production of wine Grapes and the inability of winemakers to purchase Grapes indefinitely as their stocks are constantly increasing.

During the last two years growers of wine Grapes in W. Aust. have enjoyed good seasons so far as the price and demand for wine Grapes was concerned. This, unfortunately, has not been the case in some of the Eastern States, notably South Australia. It is estimated that last season there was an over-production of wine Grapes in that State of something like 5,000 tons, which were sold at low prices.

Whether there was really a surplus, or if this glut was not actually created by the proprietary wineries in order to procure Grapes at low prices is of course a debatable question, but the fact remains that owing to winemakers in South Australia being able to procure Grapes at far below their true value, it is possible for them to sell wine in West Australia at prices that it is not possible for the local wineries to compete at, and this is where we growers are vitally concerned, for it is only reasonable to expect that the local winemakers are not going to continue to pay us the prices they have been doing, if firms in the other States are going to undercut their prices for wine.

It may be of interest to growers to know that the annual quantity of wine imported into West Australia amounts to 170,000 gallons. It will readily be realised, therefore, what a loss to local winemakers this large quantity of imported wines is.

As the total area planted to wine Grapes in South Australia during the last seven years has amounted to 8,872 acres, much of which has still to come into bearing. It would seem that instead of circularising growers in this State to refrain from planting the Wine Board should have taken action some years ago to prevent the opening up of further areas for the planting of vines.

As in the Eastern States, the major portion of their vine lands are situated in irrigated districts, it is possible for measures to be taken to prevent further planting.

Although, as producers, we should all stick together, no matter in what State we may reside, in this instance it would seem that we have done a fair share by supplying a market for 170,000 gallons of their surplus wine, and as any further encroachment on our market will seem worse than starvation prices for our wine Grapes, it is necessary that we all do our best (whether we be grower or not) to see that only West Australian wines are sold and drunk.

Australia is not a large consumer of wine and therefore there should be room for a large increase in the total quantity consumed yearly. If there was a large increase in consumption it would automatically bring about a greater demand for Grapes, and as growers in the Eastern States have no doubt been encouraged to plant wine vines (if not, why was water made available to them) it would seem that the Australian Wine Board would be doing a greater service to the industry if they were to take steps to create a greater demand for wine.

Yours faithfully,
(Signed) L. N. HASLUCK,
Herne Hill, W.A.

NEWS IN BRIEF (Cont'd.).

Imports of Pears into the principal European countries in 1937 totalled 118,000 tons, or about 1,000 tons more than the average imports in the three previous years. The United Kingdom, Germany and France are the most important markets, but those in the latter two countries have tended to decline.

The total imports of Apples into the principal European countries have declined each year since 1932, and amounted last year to only 540,000 tons, a decrease as compared with 1932 of 293,000 tons. The United Kingdom takes about 50 per cent. Imports into the United Kingdom in the past two years have come principally from Canada, Australia, New Zealand and United States.

By the narrow majority of 692 votes to 667, New South Wales Banana growers decided against the continuance of their marketing board. Growers enrolled totalled 1952, and votes cast were 1,359. As this represented more than two-thirds of those entitled to vote, the board will be dissolved.

SPRING SPRAYING

By J. L. Provan, B.Agr.Sc., Senior Horticultural Instructor, Victoria.

THE ORCHARD is brightened in September by the blossoming of Apricots, Cherries, Peaches and Nectarines. These fruits, with the exception of Cherries, are usually self-fruitful, but Cherry blosom requires cross-pollination with compatible varieties in order to set commercial crops.

Varieties which bloom early include Burgsdorf, Early Purple Guigne, and Werder's Early Black; varieties which blossom later are Bigarreau Twyford, Bedford Prolific and Early Rivers, while the late blossoming varieties include Reine Hortense, Bigarreau Napoleon, Florence, and St. Margaret. Some overlapping in blooming period occurs between the early and mid-season blossoming varieties, and some of these in turn overlap the early blossoms of the varieties which bloom late, i.e., at the end of September and early October.

Brown Rot of Cherries is a limiting factor in the production of this fruit, and, frequently, infection may occur at blossoming time, if weather conditions are favorable to the development of the fungus. To reduce the losses from this disease, growers should remove and destroy all mummies and complete the ploughing before buds open, paying particular attention to the cultivation of the strips of soil around the trees. Apply a spray of Bordeaux mixture 6:4:40, or lime sulphur 2 gallons in 80 at the "green tip" stage, and follow by a 1 in 80 lime-sulphur spray when the fruit is quarter grown.

Pear Spraying.

The first application of Bordeaux mixture 6:4:40 spray for the control of Black Spot of Pear trees is needed at the "green tip" stage, to Packhams and Winter Nelis varieties probably during the first week of September, and during the second week Josephine and Beurre Bosc will require spraying, followed by Williams. The stage of growth of the blossom buds determines the time of application of the spray. The correct "green tip" stage is recognised when the maximum number of blossom buds has the brown scales (bracts) separating and the tips of the green folded leaves are just visible.

The second 6:4:40 Bordeaux mixture spray is applied to all varieties, except Josephine, from eight to twelve days later, according to the variety and the season. The correct stage of growth in this case is known as the "finger" stage, so called because the green leaves are separated from the blossom buds which are beginning to separate in the cluster, but the white petals have not yet appeared. If a 3:4:40 Bordeaux mixture spray is applied later than this stage, Russet of the fruit may occur.

Citrus growers who have observed symptoms of Mottle-Leaf on their trees should apply a zinc sulphate-lime spray just before growth commences. The formula for this spray is as follows:—Zinc sulphate 10 lb., slaked lime 5 lb., and water 100 gallons. This spray will not cure Mottle-Leaf in all instances because sometimes this condition is caused by faulty drainage, starvation or salt. If these causes are absent, affected citrus trees usually show marked response to the application of the zinc-lime spray. In very bad cases two applications are sometimes necessary to restore the foliage to a normal green color.

New packing charts for Apples, Pears, Oranges, Lemons, Grapefruit and Tomatoes, printed on colored cardboard, which can be hung on the grader or in any other convenient place, have been issued. Growers or packers who desire copies, which are free, should apply to the Director, Department of Agriculture, Treasury Gardens, Melbourne, C.2.

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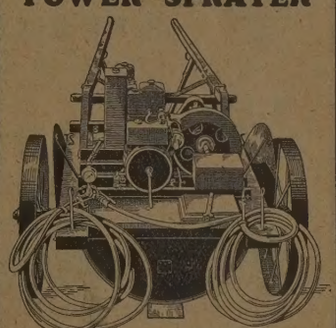

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Extract from "BETTER FRUIT," March, 1937, by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLIN MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1926, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codlin moth control."

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Arsenate of Lead Powder
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Arsenical Content of 99.60 per cent. Purity. Package, 1 cwt., 28 lb.

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98/99 per cent. Package, 1 cwt. and 56 lb.

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Prepared White Oil
89 per cent. Mineral Oil. Package, 44 Gal., 4 Gal.

Colloidal Sulphur
50 per cent. Sulphur, Weight for Weight. Package, Cases, 8 x 5 lb. Jars.

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Codling Moth Control

Cleaning up Grubs.

AN EXAMINATION of over-Wintering grubs of the Codling Moth will reveal that many have commenced to change into pupae, and clean-up operations, scraping off rough bark and dipping of boxes which have held infested fruit, should be finalised.

Where bandages have been allowed to remain on the trees, immediate attention should be given to their removal or inspection. Chemically treated bands should be removed and burnt, while the burlap type may be inspected and replaced on the tree for future inspections. Prior to transformation into moths, many over-Wintering grubs move from their Winter quarters and spin new cocoons, so that an inspection of bandages after the fruit has been harvested will not necessarily mean that bandages will remain free from grubs until the first Spring generation leave the fruit.

Another site of hibernation, generally overlooked, is the trunk of the tree just below ground level. In orchards where the trees are relatively smooth-barked, and the soil is of a light sandy type, the majority of the grubs appear to spin their cocoons about ground level. A paint scraper and a stiff wire brush will be found to be convenient implements for use during the examination of such trees.

Where bandaging is practised an increase in efficiency may be brought about by the removal of broken limbs and filling of small crevices with putty. This will ensure a larger percentage of grubs ultimately reaching the bandages, as it has been found that the majority of the grubs crawl down the main limbs to the bands and will spin cocoons in any suitable shelter on these limbs.

Another site which should receive particular attention is the crutch of the tree; leaves and small pieces of bark have a tendency to collect in such places, and make a suitable shelter for grubs in search of a place in which to spin cocoons. All this litter should be removed, and any sheltering grubs destroyed.

Finally, in view of the importance of thorough and effective applications of sprays which must necessarily be applied at specified periods, it is essential that the spray plant be put into good working order prior to the new season's spraying operations.

HOME-MADE PASTE FOR LABELS.

A good recipe for making paste for sticking labels on fruit cases is as follows:—

Take 1 lb. of flour, ½ oz. alum, and 1 pint water. Mix into a thick paste and then add boiling water until the paste thickens, stirring all the time. If too much boiling water is added, making the paste too thin, boil slowly, adding a little more flour. If to be used immediately, the paste can be made without the alum, or by adding a small quantity of bluestone as a preservative can be kept for short periods. If bluestone is added, use only an enamel or glass paste container to prevent corrosion.

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Black Spot and Codling Moth Control

By T. H. Kneen, B.Ag.Sc., Asst. Horticultural Research Officer, Victorian Department of Agriculture.

PEAR GROWERS have now completed the pre-blossom Bordeaux mixture sprays for the control of Black Spot, and will not be applying a further spray until about the third week in October. It is recommended that a half strength Bordeaux mixture be included in the calyx spray of arsenate of lead which is applied two to three weeks after petal fall. For Packham's however, a 1:1:50 Bordeaux Mixture is preferable if russeting is to be avoided.

It is a good practice with Pears to delay the calyx spray of arsenate of lead for Codling Moth control for two or three weeks after petal fall, as, by then, there is a well defined calyx cup which should be completely filled with spray mixture. The importance of a thorough calyx spray for Pears cannot be overstressed.

In regard to Apple varieties, the position is that, by the end of the first week in October, the second pre-blossom spray of lime-sulphur, 2¼ gallons in 80 gallons of water, when 5-10 per cent. of the blossoms have opened, should be completed for all early varieties such as Jonathan, Dunn's and Granny Smith. Later varieties such as Rome Beauty and London Pippin will be ready probably the following week, but, if Bordeaux mixture is used at the early finger stage, these varieties will also be sprayed during the first week of October.

The calyx spray of arsenate of lead for Codling Moth in Apples is very important, and must be applied at petal fall because the calyx closes much more quickly than in the case of Pears. Use arsenate of lead at a strength of 2¼ lbs. of powder in 80 gallons of water.

When growers have completed the calyx spray it will be then necessary to apply a series of cover sprays of lead arsenate or white oil emulsion until harvest time. The best time to apply these sprays is governed by moth activity, which in turn can be determined easily by the use of lures. In each district the orchard supervisor will maintain sets of lures which will enable him to give accurate spray advice to growers in the district. Growers are urged to take advantage of this service which has already proved valuable to a large number of growers.

Instructional circulars on the subject of Codling Moth control will be issued shortly and will be available free from the Victorian Department of Agriculture.

Orchard Sprays

New Regulations in Tasmania. Protection for the Grower.

ONE of the most costly items in the production of fruit crops is protection against insect and fungus pests. The grade names adopted by manufacturers of specifics are numerous, but the products all contain such chemicals as arsenate of lead, lime, sulphur, copper sulphate, oil, and certain vegetable extracts. The Tasmanian Government has realised the importance of effective sprays and with the object of ensuring their quality an Act has been passed giving power for the necessary supervision.

Regulations under this Act are now being enforced. They make it necessary for all "dealers" in pesticides to register with the Department of Agriculture on or before July 1 in each year and to supply on a special form the following particulars:—

1. Their names and place of business.
2. A list of the pesticides offered for sale, stating the trade name and manufacturer.
3. A complete analysis of each pesticide, showing the active constituents which are water soluble.
4. A copy of the label affixed to each package.
5. The standard weight and volume of packages.

A registration fee of 5/- for each pesticide is prescribed, but the total fee paid in any year by a "dealer" is not to exceed £1.

Under the Stock Medicines, Fertilisers and Pesticides Act, a "dealer" is defined as "Any person who carries on business as a manufacturer, importer, seller of, or dealer in pesticide as the case may be, for the purpose of trade."

BORON IN THE ORCHARD.

Victorian Tests Negative.

By C. E. Cole, B.Agr.Sc., Horticultural Research Officer.

Much prominence has been given during the last few years, particularly in Tasmania and New Zealand, to the use of boron as a corrective for disorders of the "Internal Cork" type in Apples and Pears.

Recently officers of the Victorian Department of Agriculture collected specimens of Apples and Pears which showed any resemblance to the "Internal Cork" of other places. These were forwarded to the Waite Institute in South Australia. None of the types submitted was considered by the Waite Institute to be identical with the true "Internal Cork," as it may be called.

During the 1937-38 season, tests were made to determine whether the most common of these types, usually referred to as "Pigface" or "Crinkle" of Apples, was due to a deficiency of boron. In the form of borax, it was applied to the soil, sprayed on to the foliage at two different times, and injected as a solid and in solution directly into the branches of a number of London Pippin Apple trees. Although the incidence of the trouble was light, it appeared indiscriminately on fruit from treated and untreated units, and it was, therefore, concluded that the use of boron would not prevent its appearance. It was noticed, however, that the fruit on branches injected with a solution of borax was smaller and greener at harvest time than was the fruit on untreated branches. It was also observed that bitter pit appeared equally in treated and untreated fruit.

So far, then, there is no evidence that boron is required by Victorian fruit trees, and in view of its high price, growers would be well advised to concentrate on supplying their trees with the more common plant foods.—"Vic. Journal of Agriculture."

PATENTS
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Spray "Tolerances"

Vigorous Protest by U.S.A. Grower

Dr. Ira D. Cardiff, of Yakima, Washington, who spent several thousand dollars in court actions to show up the inconsistences and injustice of spray tolerance regulations of the Federal Food and Drug Administration, has written a vigorously worded letter to the Washington Horticultural Association urging a firm stand against what he describes as "crazy" regulations. The following extracts from the letter are from the "Pacific Rural Press":—

"The special committee appointed by the President reported:

That there has been no human injury from eating sprayed Apples;

That eminent scientific men who have conducted investigations on the question are of the opinion that no danger exists from spray on Apples;

That the Apple industry has lost millions by the Government's intolerance with reference to spray on Apples.

Since none of these facts have ever been known before, this represents quite a contribution to human knowledge.

Your committee has also tentatively decided to ask the Federal Food Department to establish a tolerance of .015 grains per pound for arsenic. Since the Federal Courts have ruled that five times this amount is not deleterious and does not constitute adulteration under the law, and since the Government now has no enforceable tolerance, this is tantamount to a request from the Apple growers to the Federal Food Department to devise some means of again crippling your industry, by requiring you to free your Apples from arsenic down to .015 (and lead .03), while the fish packers are permitted to ship shrimp and all other marine fish carrying from 3 to 100 times this amount of arsenic and half the population of the country is permitted to obtain several times the amount of lead from their drinking water as they obtain from eating sprayed Apples.

The British Government has established no tolerance for lead, but has appointed a scientific commission to recommend one. The commission has recommended .1 grain per pound — three and one-third times what you desire for your Apples. If the British Government finally establishes this .1 grains per pound tolerance for lead, this, of course, will be the tolerance used by your competing Canadian and Australian Apples.

Your committee's recommendation is going to be received with open arms by Mr. Campbell (and the cleaning machinery manufacturers) as a golden opportunity to save his face, for he can no longer enforce his crazy regulations. He will thank you for your 'co-operation' and promise you a new set up—'after due consideration.' He will then conclude that you, of course, have asked for more than you expected and will put into effect a compromise figure of say, .012 for arsenic and .024 for lead, at the same time he'll know jolly well that none of his chemists are able to be sure of the difference between .01 and .012 or .015 for that matter. (The difference between .01 and .015 is a difference of one part in 1,400,000). After all this is accomplished, you will again pay tribute to the cleaning machinery racket, and continue to wash your prize Apples alternately in hot alkali and hot muriatic acid—and call upon the Government for 'loans' to keep your industry afloat."

PATERSON'S
CLENSEL
Spray Plants, Trees or Bushes while insect pests are invisible and in the larvae stage.
ONCE TRIED— ALWAYS USED
CLENSEL softens the bark, allows free flow of sap, and gives your trees a good start after pruning.
Obtainable from all Seedsmen and Nurserymen
Sole Agents: GIBBS BRIGHT & CO., 34 Queens Street, Melbourne, C.1

... FOR MEN ...
Many men have the impression that a Savings Bank Account is suitable only for women and children, and that it is neither convenient nor dignified enough for business men.
Certainly those business men who have many payments to make over a considerable area need cheque accounts, but even those, in common with all other men, will find the Savings Account a most useful and convenient aid to money accumulation.
There is nothing undignified in the transaction of Savings Bank business, but there is interest profit to be earned on such monies as would otherwise lie idle.
Throughout Australia there are Branches and Post Office Agencies of the
Commonwealth Savings Bank of Australia
(Guaranteed by the Commonwealth Government.)

PREPARING BORDEAUX MIXTURE.

For those not quite familiar with the mixing of Bordeaux mixture, the following advice will be helpful.

The use of copper as a fungicide is widely established, but to minimise the possible danger of plant injury due to soluble copper, lime is added to the copper salt (bluestone) solution. This combination spray is known as Bordeaux mixture.

The proportions of the constituents of Bordeaux mixture are indicated by a formula, in which materials are arranged in the order of bluestone (copper sulphate), lime, and water. The most commonly used formula is the 6-4-40 Bordeaux mixture, which means that 6 lb. of bluestone, and 4 lb. of "freshly burnt" or "quick" lime are used to every 40 gallons of water.

Bordeaux mixture may be prepared in a variety of ways, but the most satisfactory method is as follows:—

Dissolve the required quantity of bluestone in four or more gallons of water in a non-metal container, and add this to the spray tank when three-quarters full of water. Slake the quick-lime by adding small quantities of water, and mix the slaked lime thoroughly with 3-4 gallons of water, until an even milky mixture is obtained.

This should be strained slowly into the spray vat with the agitator working. Make the spray up to the required volume and use immediately after preparation.

Growers who are using large quantities of Bordeaux mixture will find it convenient to prepare concentrated solutions of the separate ingredients. This is done by dissolving one pound of bluestone in each gallon of water. thus for a forty gallon cask, 40 lb. of bluestone should be dissolved.

"Why are you crying my boy?"
"Because Billy slapped me."
"But why didn't you slap him back?"
"Because it would only be his turn again."

TREES ARTIFICIALLY POLLINATED.

Apple growers are causing unemployment among insects in New York State, as they apply pollen by hand to Apple blossoms in commercial orchards. It is a recent development in orchard practice in the State, but during the 1937 season about 1,500 acres in the United States were hand-pollinated satisfactorily.

At present it is recommended only as an emergency measure among solid blocks of McIntosh and Northern Spy until the time when cross-pollination is provided for by interplanting other kinds of Apples or by top-working the trees.

Professor L. H. MacDaniels, of the New York State College of Agriculture, says it may also be profitable in some orchards during seasons when weather is unfavorable for insect pollination.

The pollen is applied upon the centres of Apple flowers with a brush. About a half hour's labor is required to do the job on a 20-year-old tree capable of bearing 25 bushels of fruit.

Applying the pollen in quantity with a duster has been investigated, but no practical methods have yet been devised.

PEA APHIS.

Control in U.S.A. by Rotenone Dust.

ENTOMOLOGISTS of the Oregon Experiment Station have been successful in the development of a dust mixture for the control of Pea Aphis, states the "Pacific Rural Press."

A liquid spray was developed last year, and now growers may use whichever method is more suitable for their working conditions, the dust being particularly good under Oregon coast conditions.

Rotenone, an organic poison material which comes from certain tropical plant roots, and which was used in the control of the Pea Weevil is also an active ingredient in the new sprays used developed for Pea Aphis. As Aphis have a natural waxy surface, repellant to water, it is necessary to use a spreader or wetting agent with either the dust or liquid form.

Rotenone is so extremely poisonous to Aphis that in the liquid less than one one-hundredth of one per cent., and in the dust mixture less than three-fourth of one per cent., of the pure rotenone is used. High pressure application is necessary with both methods.

The actual formula for the liquid spray is 1½ pounds of 5 per cent. rotenone dust and 1½ pounds of spreader to 100 gallons of water.

Getting out of a tight fix—particularly a pair of tight shoes—is a grand sensation.

ROOM TO LET - Every modern convenience, free meals at all hours, particularly good view, very considerate landlord. Apply "Careless," Sleepy Hollow.

"Stand by to repel boarders!"

—with Gargoyle WHITE Oil

A clean crop is the "bread and butter" of orchardists; but some treat it as a matter of personal pride to prevent the Codlin Moth having the laugh on them! Crops CAN be kept clean (and that means more profitable) by a regular, comprehensive spray program with Gargoyle WHITE Spraying Oil as chief summer control medium plus either lead arsenate or nicotine sulphate, according to the type of infestation. Gargoyle Spraying Oils are all perfectly compatible with all other insecticidal and metallic fungicidal sprays that are either highly acid or highly alkaline. Use this famous pioneer Spraying Oil throughout the Summer and keep your trees cleaner and healthier—for it has no superior in the horticultural world.

Gargoyle WHITE Spraying Oil

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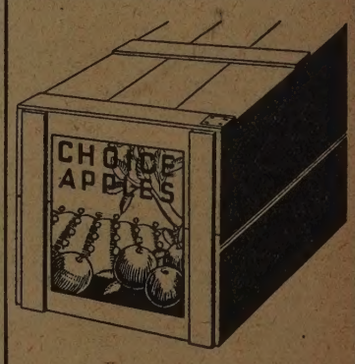

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Australian Apple and Pear Council

Annual Conference Opens in Sydney on October 10

Agenda Contains Many Interesting Items

THE ANNUAL CONFERENCE of the Australian Apple and Pear Council will be held in the Commonwealth Bank Buildings, Pitt-street, Sydney, during the week commencing October 10. The first day (Monday, October 10) will be for executive and finance committee meetings, and a conference re trade with the East.

The full conference sessions commence on Tuesday, October 11, at 10 a.m. The official opening will be at 2.30 p.m. that day by the N.S.W. Minister for Agriculture (Mr. Reid).

Annual Report.

The annual report is a very comprehensive document and deals with the many matters which have engaged the attention of the Executive officers during the year. A short summary is as follows:—

Quota System.

The prior agreement with N.Z. was repeated last season. Considerable difficulties were experienced in the 1938 season in administering the quota system in Australia. Owing to a lighter crop of export fruit, Western Australia released a portion of her original quota. This was more than counter-balanced by the heavy crop in South Australia.

The balancing of the quotas as between the States is a matter for consideration.

Shipping and Freights.

Immediately following the last Sydney Conference a representative deputation waited on O.S.R.A. and put before that body the matters dealt with at the Council meeting.

Shipowners' representatives agreed to consider the position which arose through the rejection by ships officers of fruit passed by Government Inspectors, i.e., where such fruit was again submitted to and passed by inspectors to be recognised as good tender against booking notes.

The releasing of shipping programmes at the earliest date possible was requested, together with details as to arrival dates further, that in allocating vessels to the fruit programme, fast vessels be used in the season and the slower boats later; also better spacing of ships at Australian ports.

Better Pear space for all the States was asked for.

Shipowners were requested to make available to the Council (through State O.S.R.A.'s) collated figures showing total quantities of Apples and Pears actually shipped to United Kingdom ports. Such figures could be obtained from ships manifests, and were desired fortnightly or monthly in order to keep a check on the quota. Shipowners stated that they felt certain they could agree to this request.

Shipowners also noted the request for more adequate facilities for shipment to Continental ports. The request for rebate of freight on Plums and Grapes, similar to that on Apples and Pears was not acceded to.

Other matters brought forward included reconciliation between overshipment and short shipment on vessels of the same line. (Reply —this must remain one for discussion between the shipper concerned and the shipowner when such conditions arose.)

Subsequently a letter was received from O.S.R.A. confirming the cash discount of 3d. per case in the rebate of 5d.. but directing attention to the following:—

1. The necessity for accurate forecasting.

2. The necessity for the co-ordination of cargoes to enable full cargoes to be secured at fewer ports.

3. The method of packing, resulting in many instances in the cases having a considerable bulge.

4. The use of different types of cases.

5. The necessity for the best use of the latest scientific method to secure more effective use of space.

Further that the cash discount of 3d. was for 1938 only, and that shipowners reserved full right to apply the payment of the 3d. as a deferred allowance for any remaining period should the foregoing not be dealt with satisfactorily or if other matters arose detrimental to shipowners' interests.

Arrangements were made with O.S.R.A. for supplying information as to arrival dates of ships, the programme being so arranged as to avoid as far as possible the simultaneous arrival of heavy cargoes at British ports. While the programme of loading dates brought certain difficulties, the final result was generally satisfactory. The agreed 3d. per case rebate operated from the beginning of the season. As previously advised this was for one season only, but there appears to be no reason why the system should not continue during the term of the agreement.

Certain problems arose in the continued shipping of Northern Tasmanian fruit (outside the Tasmanian quota) in Victorian space and later in the season the diversion of a ship conveying fruit, presumably for Rotterdam to Hull. This was all outside the quota and the latter formed the basis of a complaint from the National Federation of Fruit and Potato Trades, London.

Insurance.

An item dealing with effective insurance is on the agenda paper for discussion. In particular, a totally unexpected development arose when a breakdown occurred in the machinery of the S.S. "City of Brisbane," and the fruit had to be transferred to the "Dunedin Star" at Adelaide for shipment. The payment of a second freight rate was demanded. It was discovered that uniform conditions were apparently not being applied in this matter of the payment of a second freight, and on arrival of the goods the amount claimed for second freight was paid into a trust fund and the matter is now in the course of arbitration. This is a new and serious matter involving not only the question of freight and B/L. clauses, but also that of the condition of the fruit, as the transferring of the fruit from one steamer to another by no means improved its carrying qualities. Serious losses were incurred through loss of market, the second carrying vessel arriving out of the appropriate marketing period.

It had been generally believed that the payment of the required insurance covered all reasonable risks for the delivery of the cargo. The points thus raised in this connection were novel, and the conference will give attention to this matter both in relation to the present problem and so that provision can be made for adequate protection for any similar event of this character in the future.

Proposed Control Bill.

At the 1937 Sydney Conference a representative of the Commonwealth Council of Agriculture dealt with ten points, nine of which were being handled by this Council, the tenth point being the paragraph (organisation of the industry, including provision for a marketing authority). During the progress of the season a questionnaire was sent to various growers. Without any prior advice to the Council, the Federal Ministry announced that an Apple and Pear Control Act was contemplated and that the passage through Parliament was desired before the Parliament rose on June 30. As soon as the contents of the proposed Bill became available copies were circulated to State Associations, and a meeting of the Executive of the Council was convened.

There was a general feeling in the several States that the Bill had been unduly rushed, there being insufficient time for producers' associations and their members to study the measure. It was understood that when the Canberra Conference dispersed delegates would take the revised draft of the Bill back to their States for immediate consideration. The Ministry finally announced that due to the opposition by the Tasmanian State Fruit Board the Bill would not be introduced into the House during the June session. Since then the Acting Minister for Commerce has visited the several States and it is understood that the Bill will be introduced during the September or October session in order that it may speedily be made law.

Bounty on Exports.

Considerable pressure was brought on the Council to make representations to the Ministry for an increase on the 1937 bounty and for the early announcement of a bounty on 1938 exports. A deputation met the Prime Minister, the Minister for Commerce, Dr. Earle Page, and the Assistant Minister for Commerce, Mr. Cameron, on March 4. The Prime Minister then announced that no increase would be granted on the 1937 bounty and that no action would be taken with regard to 1938 exports until the results of the season were known. At the same time a request was put forward to the Prime Minister for a grant for educational publicity to increase consumption of Apples within the Commonwealth.

Apple Publicity Campaign.

On March 31, the report continues, we were advised that the sum of £2,000 would be available for Apple publicity in Australia, presumably along the lines of the 1937-1938 campaign. We drafted an alternative proposal, placing weight on educational publicity as opposed to "advertising" and providing for larger sums for State Committees in order to carry out local publicity. This was agreed to, the details being furnished in a separate report.

Summed up: We were able to secure the co-operation of Health Authorities, Nutrition Commitees, Dental and Medical Profession and others, with the result that a large increase in propaganda on educational lines was secured, and it is felt that it is in this direction that the most constructive work is being done. New facts concerning the value of the Apple from a food and medicinal point of view have become available, and such have formed the basis of informative press articles and radio talks, and for circulation as pamphlets. Probably the most spectacular event was "Apple Week" in Victoria. This event is capable of being expanded into an Australian wide movement with highly beneficial results.

Interstate Grading Conference.

At the request of the Tasmanian State Fruit Board, a fruit grading conference was held at Sydney on December 8, 1937.

The grading conference approved of the idea of marketing fruit of real quality and that blemish tolerance should not be the main guidance in defining grades. Details of the grading conference discussions, recommended varieties, sizes and final dates for marketing were submitted to all State associations.

Revision of Ottawa Agreements.

Opportunity was provided by the Federal Government for consultation with the Official Trade Delegation before its departure for America and England to examine the proposals concerning the fruit industry. Briefly, the general approval was expressed of the proposal that should there be reduction or elimination of the tariff on foreign fruit entering the United Kingdom during the Australian-New Zealand season, Apples from British Dominions should have the exclusive right to British markets during that period.

It is understood that an agreement has been reached between Great Britain and the United States of America, details of which are awaited with the most profound interest. The reasons for the adequate protection of Dominion producers are well known to both growers and the Government.

Apple Publicity in the United Kingdom.

At previous Council meetings reference has been made from time to time regarding suggested improvements in the Apple Publicity Campaign in the United Kingdom, with particular reference to the subject of general educational publicity to increase Apple consumption as opposed to the spending of the full funds available on general poster and press advertisements re Australian Apples. It was felt that the identity of Australian Apples was largely lost at the point of distribution to the public. Mr. W. M. Carne, in his report, also directed attention to this matter.

Your President was invited to meet the overseas Trade Publicity Committee and in doing so he stressed the points as set out in the report herewith.

Briefly, the idea is that portion of the funds subscribed by Australian producers should be set aside into a general fund, to which other countries exporting Apples to the United Kingdom and the British producer could contribute, **in order that educational publicity based on medical testimony could be placed before the British public to induce a greater consumption of Apples.** With this general propaganda as a background the remaining portion of the Australian funds should be used to emphasise the Australian product, particularly the fact that it was fresh, new season's fruit, and that such was of special value as compared with cool stored fruit only otherwise available.

It is felt that the proposed education publicity campaign could quite readily be conducted as part of the work now handled by the present Australian Publicity Staff in London.

Trade with the East.

At the 1937 Sydney Conference a Committee was set up to deal with the Near Eastern trade.

Immediately following the conference, deputations waited on the several shipping companies engaged in the Near Eastern trade, requesting reductions in freight and the inauguration of a system of booking notes similar to that now used in connection with fruit shipments to the United Kingdom and the Continent, except that booking notes should be signed 10-14 days prior to the sailing of each steamer.

A better allocation of space in B.I. Steamers was requested and it was agreed that arrangements would be

made in future for an allocation of space to all States at which any B.I.S.N. steamer called, but, if such space offered was not accepted within reasonable time, same would be transferred to other States who required the space.

Improvements were requested with regard to steamers on the Australia-Shanghai run. With regard to shipping to Netherlands and Malayan Territories delegates had pointed out problems concerning faulty discharge. It was pointed out that some of the ships were more suitable for the carriage of meat than fruit, and the companies concerned stated that when building new ships the requirements of the fruit trade would be considered. One difficulty encountered by shipping companies, also N.S.W. exporters, was the rejection of fruit at the ship's side, insufficient time being available to obtain fresh consignments.

During the year a problem arose in relation to fruit for Ceylon and the Dutch East Indies, namely, the attitude of the authorities in Ceylon and the Indies as to restrictions on the importation of fruit owing to the fear of the introduction of Fruit Fly.

Counts on Fruit Containers.

During the year constituent associations were furnished with a copy of the letter from Mr. Everard Ross, the Council's representative in London, pointing out the desirability of an authoritative chart for Apple packing. Points stressed by Mr. Ross were (1) buyers claimed that the counts delivered to them have been at variance with the sizes to which the seller was entitled under the sale contract—for instance, it is claimed that the 150 count is not a 2½ in. Apple, the 163 count being regarded as the beginning of the 2½ in. range. (2) The accepted counts on the London market are those which have been established by northern American shippers, while from Australia a considerable number of odd and additional counts are used. The issuing of an authoritative chart would make it clear to British buyers that in the case of Australian sale contracts the counts would at times differ from the North American counts. (3) In the absence of this authoritative chart an opportunist buyer, if he found the market going against him, might legally reject deliveries tendered to him against purchases of Apples from any of the Australian States where counts are being used in addition to the former size branding.

This matter was placed before the Department of Commerce and a reply was received stating the Department was prepared to arrange for the issue of a packing chart for both the Standard Box and the Dump Case, if a sufficient degree of uniformity (presumably between the State's Officers) could be obtained to make such a chart effective, but in view of the differing usages in the various States such action appeared to be premature.

This matter, however, would be placed before the State Supervising Officers at their next conference, as it would appear some action could be taken by them to adjust the matters referred to. This matter is listed for discussion.

Other matters dealt with in the report include Fruit Drinks, Funds for Continued Apple and Pear Publicity, Survey of Ships Cargoes, Fruit Intelligence Notes, Pear Export Varieties and Moisture Content of Pear Boxes, Empire Fruits Council, State Supervising Officers, and concluding with thanks to all who assisted in the year's work of the Council.

The Agenda.

Among the items on the agenda paper are the following:—

Apple and Pear Export.

(a) Figures for 1938 exports.

(b) The quota system and contact with New Zealand.

(c) Observance of quota and variation of destination after sailing of steamers.

(d) Report of deputation to Prime Minister and re Ottawa Agreement.

Grading Regulations.

(a) "That there be no alteration in the Export Regulations for 1939 season." Tas. State Fruit Board.

(b) That steps be taken to ensure an adequate inspection of fruit for export and a uniform interpretation of the regulations by inspectors. (W.A. Fruit Shippers' Committee.)

(c) That the Department of Commerce be requested to discontinue the practice of the past season when certain selected packs were specially certified after inspection at the packing sheds and to delete the regulations providing for such special certification. (W.A. Fruit Shippers' Committee.)

Shipping and Freight.

(a) Bill of Lading Clauses.

(b) Discussion re arrival dates of fruit steamers in United Kingdom (Victorian Fruit Marketing Association.)

(c) That the O.S.R.A. be requested to release the March and April programmes simultaneously and in ample time to allow shippers to make satisfactory arrangement. (W.A. Fruit Shippers' Committee.)

(d) That the Executive be requested to arange with the O.S.R.A. the renewal of the cash discount on freight. (W.A. Fruit Shippers' Committee.)

(e) That the O.S.R.A. be informed of the vital necessity of providing adequate space at suitable dates for Liverpool, Glasgow and Continental ports and urged to meet shippers' requirements. (W.A. Fruit Shippers' Committee.)

(f) That the O.S.R.A. be requested to include Port Said in the zones covered by the A.O.T.A. Agreement. (W.A. Fruit Shippers' Committee.)

(g) Shipments to Liverpool.

(h) That O.S.R.A. be requested to provide adequate space for both Pears and Apples for Southampton, and if possible to arrange for fortnightly sailings for that port.

(i) That this Council request the National Fruit and Potato Trade to press for more careful handling of fruit during discharge at United Kingdom ports.

Insurance.

(a) Need for adequate insurance on fruit cargoes—with special reference to the "City of Brisbane." (Vic. Fruit Marketing Association.)

(b) Survey of ships' cargoes—discussion re appointment of one firm to survey and report on ships' cargoes.

Plums for Export: Discussion re Plum export. (Victorian Fruit Marketing Association.)

Counts on Fruit Containers.

Correspondence from Mr. Everard Ross.

Empire Fruits Council.

(a) Reports.

(b) Dominion Fruit Producers Conference, London. Report by Mr. E. Ross.

1938 Bounty.

Report of deputation to Prime Minister.

Trade with the East.

Report of Committee.

Empire Producers Conference, Sydney.

(a) Report.

Publicity in the United Kingdom.

(a) Report by Mr. A. E. Hyland.

(b) "That this Council requests the Australian-Overseas Trade Publicity Committee to use portion of the Apple advertising funds for educational propaganda—in co-operation with other Apple suppliers to increase the consumption in U.K. of Aples and Pears generally." (Victorian Fruit Marketing Association.)

Tariff on Fruit Containers.

"That this Council request that by-law No. 69 be amended in order to provide that timber used for cases in fruit industry operations shall not be dutiable, and shall be made free from sales tax." (Victorian Fruit Marketing Association.)

Australian Markets.

(a) Report of grading conference held at Sydney, December, 1937.

(b) Federal Government's decision not to impose Excise or Sales Tax.

(c) That the Commonwealth Government be urged to provide a regular annual subsidy for at least three years for Australian market publicity. (W.A. Fruit Shippers' Committee.)

(d) Report on Apple Publicity Campaign.

(e) Funds for 1939 programme.

Fruit drinks.

There will be in attendance: Messrs. J. B. Mills (President) and J. H. Astell (Vice-President); D. E. Ryan, R. H. Thompson, T. Burnaby, E. Norris, J. R. Abel, R. W. Humphreys, C. H. Cane, J. Piggott (Tasmania); J. McN. Martin, W. P. Scott, H. W. Soothill, R. M. Carter, F. Simper (W. Aust.); G. W. Brown, F. Moore, H. M. McLean, F. R. Mellor, A. S. Harrison, F. Cave (Victoria); J. B. Randell, P. R. B. Searcy (S. Aust.); A. E. Herring, J. W. Blick (N.S.W.); B. Flewell Smith (Queensland); R. E. Boardman (Secretary), also officers of the Department of Commerce and State Departments of Agriculture.

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DRIED FRUITS NEWS AND NOTES

Mid-Murray Notes

SULTANAS DEVELOPING WELL — IMPORTANCE OF COVER CROPS — RELATION OF NITRATES TO SOIL FERTILITY — IMPORTANT MATTERS DISCUSSED AT DRIED FRUITS CONFERENCE — WINEMAKERS' CONFERENCE — FROST PREVENTION — NEW WAGES LOG

(By Our Correspondent.)

RENMARK, Sept. 25.

SPRING IS HERE and the Apricot trees have blossomed very well, the vines are sending out the young shoots and everybody is as busy as they can possibly be, cleaning up the weeds which have grown since the irrigation. The first irrigation commenced at the latter part of August and is now nearing the end. The land has not taken much water wherever the last Autumn special irrigation was given, but where the land has received no water excepting the sparse Winter rains, it has absorbed a good deal.

Sultanas are indicating a particularly large bunch showing. Double bunches are in evidence, and when it is possible to see bunches poking their noses up from spur buds, it is a sign that a good crop has made its appearance. Last year was one of large production, with vine fruits, and it was anticipated by many growers that a reaction would follow this year, and that this crop would be a lean one, but this is not so. When a study is made of the factors determining bunch development within the dormant bud, it will be noted that a very big factor lies in the weather conditions from November to March or April. It has been found by our scientific research workers that the bunch commences to develop in November for the following year's crop, and progresses along the cane as the season progresses, and a great deal depends on the weather in late Summer and early Autumn. The layman has noted that when late Summer is and early Autumn is characterised by dull weather and cool days and night, there is never a good development of bud fertility in the following year.

Last year, our late Summer and early Autumn weather was one long succession of sunshiny days, which, to a great extent account for this year's good showing of Sultana bunches. There is a marked difference in the appearance of vines on blocks which have been carrying a succession of cover crops and those in which cover crops have been absent. The bunches on vines which lack organic matter are a fair distance out on the shoot and often the bunch itself has a small tendril attached.

This characteristic indicates a lack of natural fertility, and clearly shows that in maturing last year's big crop, the vine did not have sufficient energy left to develop the embryo bunch into a strong one. On the other hand land which has been consistently

planted with cover crops

shows vines with stout bunches, with, in many cases, double bunches coming from a single bud, while it is not uncommon to see a bunch appearing on a spur left for next year's rods. One factor often overlooked by growers who do not plant cover crops is that among other things, it arrests or holds the soil nitrate, which would otherwise be lost, either by leaching or from other causes.

The importance of nitrates and its relation to fertility, is gradually being appreciated by the progressive practical fruitgrower, and a good deal of interest is being taken in the movement of soil nitrates at the different times of the year, and there is a good deal of conjecture as to whether the nitrogen cycle, as indicated by Sir John Russell, is equally applicable under our conditions as those which apply in other places.

At one time it was believed that soil nitrates were solely due to the activity of soil bacteria, but in recent years it has been found, chiefly through the research work of Professor Ohar in India, **that soil nitrates can be formed by the action of sunlight, and without the aid of soil bacteria.**

The thought has occurred to me that the action of

sunlight on bud fertility

may in some measure be due to their phenomenon. There seems to be room for local research on this matter.

Dr. Teakle, of the Western Australian Dept. of Agriculture, has published some interesting data on the subject of available soil nitrates on an Apple orchard with a 40 inch rainfall. The work is of a very comprehensive nature, and is a guide to Apple growers working under similar climatic conditions, but we have still to know the nitrate movements under our climatic and irrigation conditions.

The importance of a good supply of nitrates is emphasised by all soil research workers, and it appears to me that although other elements may be deficient without any real significance, a deficiency of nitrates will materially affect the productiveness of the land. Work on soil nitrates is in progress by the C.S.I.R. officers (Mr. A. Ingerson doing the Renmark samplings), but the work is in its early stages and up to date is still unenlightening, but should prove interesting as time goes on.

Dried Fruits Conference.

The State Dried Fruits Association Conference took place at Waikerie this year, and was attended by the following delegates:—Messrs. H. D. Howie, J. B. Murdoch (Board of Management), C. S. Ruston, E. N. Seary, H. C. Carne, O. Weste (Renmark), E. D. Sims, C. W. Hill, J. Van Vesson, V. Shepherd (Barmera), W. Curren, A. P. Wishart, A. C. Ingerson, C. Moritz, H. Stone (Berri), W. Jorgensen, R. Curtis (Cudell), J. Weatherall (Kingston), K. Scott, F. Battams (Moorook), J. R. Jemison, J. J. Odgers (Willians (Waikerie), S. C. Frieker (Pyap), Messrs. Salter and Chapman (Angaston), J. Neats (Stanley Flat), C. L. Colley, J. Victorsen (Clare), T. R. Bruce, A. H. Fraser (McLaren Flat), Agents' representatives: A. Hayter (Golin and Co.), Newtown (Wood and Son). Visitors: C. Farmer (Angaston), R. P. Shepley (Clare), C. N. Tonkin (Pyap), R. Lambert, C. Legerwood (Waikerie), J. Dalziel (Cudell), and D. B. Ogilvy, Conference Secretary.

Mr. Murdoch opened the conference and welcomed delegates and visitors on behalf of the Waikerie branch.

Mr. H. D. Howie occupied the chair, and the following items came up for discussion: "Low-grade Currants for distillation," "Marketing and grading of dried Apples," "Tree fruit differentials," "Currant Bounty," "Shed classing of fruit," "Low-grade Currants for power alcohol," "Deterioration of quality of River Currants," "Commonwealth publicity for dried fruits," "Merchants' discounts," "Differentials on Currants."

Many resolutions were framed to be sent on to Federal Council meeting. Delegates appointed to attend this meeting were Messrs. Curren, Fraser, Sims, Chapman, Fricker, Ruston.

The chief subject occupying the time of Conference centred around the problem of the Currant.

For many years the quality has been deteriorating, and that fact brings an additional complication on the disposal of low-grade fruit. The reason for the deterioration in grade over the past few years may be due to some minor soil deficiency, or the unseasonal (January) rains experienced in the past four out of five years. Mr. A. V. Lyon, at the Merbein Research Station, is commencing a series of experiments on soil deficiences to try and clear up this point. There is no doubt that with a return of more normal seasonal weather conditions during January, the quality of the Currant will improve, but whether it will get back to the grade produced when tonnages were lower is yet to be determined.

Through

improved cultural methods

we have been producing heavier crops in recent years, and it is quite possible that our cover crops have "bucked up" the soil nitrates, which in turn may expose a potash shortage, and this may cause a lack of sugar in the fruit. This theory will probably be determined when Mr. Lyon's experiments have had a few years' run, so in the meantime we can hope for more favorable weather during January and February.

The possibility of utilising the low-grade Currants for power alcohol was discussed at Conference and will be more fully dealt with at Federal Council meeting, as will all the resolutions passed at the State Conference.

Winemakers' Conference.

A conference of the Co-operative Winemakers' Association was held at Waikerie, and was represented by the various Co-operative interests along the River, and the Barossa districts. Berri Distillery was represented by the following: G. F. Moisey (acting chairman in the absence of Mr. A. Kelly, who is in England on a wine-selling campaign), A. H. Heward, F. G. Cocks, E. H. Williams, A. C. Ingerson, W. S. Garnet (Manager), L. E. Nairn (Secretary), Nuriootpa was represented by J. A. Craig, F. W. Gursanski, A. E. Lange, and W. H. Craig. From Renmark, D. T. Du Rieu (Chairman Renmark Growers' Distillery), E. F. Edmonds, R. Fisher, O. Weste, Waikerie interests were served by E. Miller (Chairman Waikeri Winery), K. Dunstan, C. B. Willims, E. Rowe, J. M. Darlin.

The main object in the Conference of Co-operative interests is for the discussion of matters which will come up for discussion at the Federal Viticultural Council meeting, which is to be held in Sydney early in October, and as the production of the Co-operative Wineries and Distilleries represents about a third of the total production of wine and spirit in Australia, it is necessary to safeguard not only the co-operative interests, but all phases of production and sale of wine and spirit.

There is still a touch of Winter in the air, and growers who have land situated in a frost zone are keeping an anxious look at the weather conditions. This is a worrying time for those who have to protect their vineyards with oil burning fire pots. Mr. L. Maddern, of Monash, is taking an active part in frost prevention, and keeps in constant communication with the Adelaide Meteorological station for frost warnings, while Mr. T. R. Francis, of Waikerie, takes an active part in that area.

Frost fighting has been so well organised at Monash and Waikerie that automatic frost alarms have been installed, and when the temperature reaches a dangerous level, arrangements have been made with the telephone exchange to ring all growers in frost areas, and by this means grow-

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ers lose little time in lighting their fire pots.

Warnings are also given through the medium of our local wireless station, 5RM, so that all necessary precautions are taken in the event of dangerously low temperatures.

Although eight warnings for growers to "stand by" have been called, only on one occasion was it found necessary to light up at Monash, but at Waikerie it has not yet been necessary to start the fire pots into action.

New Wages Log.

The A.W.U. have made certain demands on the fruitgrowers in a new log of wages and conditions which for mere effrontery take a lot of beating. The present rate is £3/17/- per week for 48 hours. The new demands are for £5 per week of 40 hours, to which additions of 4/- for seasonal employment, and 10/- loading for Renmark, Mildura, Murrumbidgee areas, have to be made. Among other things are treble time for Sunday work. A chair for each Apricot cutter with a back to it. The only thing which seems to have been omitted is for the employer to make good the weekly loss of his employee on the gee gees. Fruitgrowers would be glad to get £5 per week for a 40 hour week. A lopsided standard of economic conditions have been created by the excessive protection of secondary industries, while the primary industries are struggling for a mere existence.

Not many primary industries enjoy the cost of production and to have extravagant demands made for seasonal work needs strong measures to combat it.

DRIED FRUITS.

Overseas Sales Remain Steady.

CLEARANCES of Australian dried vine fruit in overseas markets continue to be steady, with values practically unchanged. Considerable progress has been made with the task of quitting the extra large pack for export this season. The generally high quality of Sultanas has been an important factor in assisting sales. In this connection a comment by a Liverpool seller on the trade in general is interesting:

"In view of the fact that the trade has had to rely on Australian Sultanas for supplies, as Smyrna, Cretans, Greeks and other growths are finished, this fruit has practically monopolised the market and has sold freely, which is not surprising in view of the values offering."

The same authority states that the Smyrna total crop was 38,480 tons, against an estimate of 50,000 tons in July, 1937. In the early stages the 1938 crop was estimated at below 80,000 tons to 100,000 tons, and has since been reduced to 70/80,000 tons. The level of prices likely to rule will depend to a large extent on the quota restrictions that may be imposed by Germany. It is anticipated that there will be a material increase in exports from Turkey to Germany this season owing to the altered position of the trade balance between the two countries.

Lexias are holding their value in the U.K. market and seem likely to do so for a considerable time. Currant values are showing no improvement and the prospects for this fruit are by no means encouraging. Values are very largely governed by Greek conditions, where the new crop prices, although showing no material alteration, hold out no hope of greatly increased prices for Australian.

FROST DANGER.

So far the principal dried fruit areas have come safely through the period of frost danger. Only minor damage has been done. The value of organised smoking of vineyards as a protective measure has been demonstrated in the M.I.A. district, and this season the precautions have been more thorough than ever before. Experienced growers are more than ever convinced of the value of this method, which, they claim, is capable of effecting saves during any ordinary frost, although it is recognised that, so far as present knowledge goes, there is no practicable safeguard against great blizzards such as that which caused such disastrous destruction about ten years ago.

NO BOUNTY ON CURRANTS.

The Commonwealth Government last month definitely refused a request on behalf of the industry for a bounty on export Currants. The case presented on behalf of the Currant growers stated as its main grounds, the low price ruling in London, the small preference on the British market over the Greek product, combined with the exchange rates for that country operating to the disadvantage of the Australian exporter, and the absence of any preference on the New Zealand market. An export subsidy of £5 per ton was asked for. The London prices of £27 a ton and under showed the grower barely £15 a ton, and this with the higher values on the small Commonwealth quota did not give a payable price.

DRIED FRUITS SALES.

The Commonwealth Dried Fruits Export Control Board advises that the sales of Australian Dried Fruits in London for the week ending September 22, totalled 3,094 tons, including 1,813 tons of Sultanas at an average of £39/3/4, 1,155 tons of Currants at £26/13/4, and 38 tons of Lexias at £45/14/3 per ton. Shipments to Great Britain to date are 49,802 tons, of which approximately 5,500 tons are in transit. The quantity of fruit unsold in Great Britain is about 14,000 tons. Sales to date in Great Britain approximate 30,500 tons. Seasonal and special demands are now strongly in evidence.

DRIED FRUITS ACT.

Grocer Fined at Warracknabeal.

On September 22 at Warracknabeal Court, J. McD. Page, grocer, was fined £3, with £19/11/- costs, on a charge of having bought Sultanas that had not been packed in a registered packing shed. Inspectors Walsh and Joy said that Page had bought Sultanas in unbranded boxes from an itinerant hawker in November of last year.

The old man was sitting on the wood pile whittling when his wife came out to hang up the clothes.

"Paw," said the Mrs., "ther's a bug crawlin' on you."

The old man went right on with his whittling, without looking up. Presently, he said, "No, Maw . . it's crawlin' off me!"

Citrus Notes

MURRUMBIDGEE CITRUS.

Official Report on Conditions.

The N.S.W. Dept. of Agriculture has issued the following report on citrus crops:—

"The greater proportion of the Navels has been harvested at Griffith, although there are some thousands of cases yet to be picked. Some export to New Zealand was still proceeding in the Leeton sector, but only a small percentage of the fruit remains on the trees.

Some good to heavy crops of Valencias are to be seen around Griffith. A fair proportion of small-sized fruit is apparent at Leeton, but some improvement was noticeable recently. The general quality is very good.

A large percentage of the Lemon crop still remains on the trees in the Leeton No. 2 district, owing to the unsatisfactory market, while most mature fruit is frosted in the No. 1 district. A medium Summer crop, however, is in sight, A considerable quantity of Lemons is still hanging at Griffith and disposal of some lots to factories for peel purposes is being effected.

Harvesting of Grapefruit is in progress at Leeton, and some canning has been carried out. Approximately 40 to 50 per cent. of the crop has been cleared.

Considerable quantities of excellent quality Navels are being picked in irrigation areas on the Murray River, but the only export to New Zealand during August was carried out by the Barham packing sheds. There are large quantities of this fruit still on the trees.

Large crops of Valencies are in sight, and size and quality are good. Harvesting of Grapefruit is being carried out fairly freely at Curlwaa, and moderate prices are being obtained. Satisfactory crops of Lemons are in view and some are being cleared at slightly better values than during the previous month.

CITRUS CANKER IN N.Z.

Citrus Canker is one of the plant diseases that has not troubled Australian growers thus far, and precautions are being taken to keep it out of the country.

A recent report from New Zealand states that Canker was first found in that country in May, 1937, and a subsequent survey showed that it was widespread in the North Island, and was present in all citrus areas with the exception of those in Hawkes Bay and the South Island.

Commenting on this outbreak, Dr. R. J. Noble, biologist of the Department of Agriculture, said that this serious bacterial disease occurred practically throughout the citrus-growing areas of the world, wherever climatic conditions were satisfactory for its development. Studies on the disease in the past had indicated that it could develop also in the coastal citrus areas of Australia, should it ever become established in this country.

In Florida and in South Africa, heroic measures had been adopted with a view to effecting its eradication. This, however, involved the destruction of several million trees in orchards and nurseries, and the cost in Government and private funds in Florida alone had been estimated as exceeding two and a half million dollars (£A625,000). Eradication costs in South Africa had exceeded £100,000.

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Tasmania

BLOSSOMING TEN DAYS LATE — APPLES SHOWING WELL FOR A GOOD CROP — CULTIVATION AND SPRAYING NOTES — APPLES BEING REWORKED TO GRANNY SMITH AND DELICIOUS, PEARS TO PACKHAM'S TRIUMPH AND WINTER COLE — BETTER PROSPECTS FOR SMALL FRUIT GROWERS — EXPORT PRICES BEST FOR YEARS — NATIONAL INSURANCE SCHEME OPPOSED — CONFERENCES OF TASMANIAN PRODUCERS' ORGANISATIONS AND PROPOSED ALTERATION TO METHOD OF ELECTING THE STATE FRUIT BOARD — BETTER INTERPRETATION OF APPLE EXPORT REGULATIONS NEEDED.

(By Our Correspondent.)

SEASONAL WORK was considerably delayed in the early part of September by bad weather. Snow fell on the lower hills in Southern Tasmania during the second week, accompanied by severe gales, which I understand swept Victoria also. However, since then the weather has been favorable and the green tip spray is being put on.

The blossoming is about 10 days later than last year in most districts.

Pears are showing well for a crop on most varieties, and are coming on rapidly.

In spite of the severe weather, **Apricots** seem to have set well, but of course may drop later at stoning time.

Peaches and Plums are not much grown in Tasmania.

The Apples are showing well for a crop, and would not be affected by the previous cold snap.

The

Green Tip Bordeaux

will be completed in a day or two in most localities. The blossoming being late helps the trees to escape some of weather conditions that often catch the earlier blossoming varieties when blossoming is early. **Democrats** seem to be liable to set light when they come out early like last season.

Cultivation will not be started as a rule till the fruit has set, and the calyx spray on, as there is a widespread belief that cultivating during that period increases the liability to Black Spot infection. I am inclined to think that it does, especially if there is rain soon after.

Reworking unpopular varieties is going on all over the State, so in a few years Tasmania's total crop will increase considerably.

Granny Smiths seem to be the favorite, and I think there may be an over-supply of them in the near future.

Delicious are also a favorite in some localitties.

With Pears, most of the reworking seems to be to Packhams and Winter Coles, as other good varieties such as Josephines and Winter Nelis are not profitable in most localities, the former being shy bearers as a rule, and the latter prone to late Spot, which often develops just before picking time.

Considerable apprehension is being felt by those engaged in the fruit industry owing to reports of the American Trade Agreement. It is realised that the removal of the duty on American fruit would be a serious blow to our trade. It is hoped that if the duty is taken off or lowered that America will be restricted to a definite period in which to sell their fruit on the British markets.

Prospects for the **small** fruit growers seem to be brighter this season, as stocks of pulp are considerably reduced, and there is a prospect of the oversea demand continuing for some time yet. It is doubtful if the Small Fruits Control Board will be ready to operate this season.

It is gratifying to note that the Tasmanian Cider was awarded two first prizes and one third at the Melbourne Show.

The opposition to the proposed Federal Control Board for Apples and Pears is just as strong as ever, and I understand South Australia is by no means unanimously in favor of it.

Good Export Prices.

It was very gratifying to receive payable prices from oversea for the past season's shipments. Apart from those boats which delivered their cargoes in bad order, the season has been the best for years. A pleasing feature from Tasmania's point of view was the way **Sturmers** held up in price in comparison to other varieties from other States.

The National Insurance Scheme is not popular here. It seems to be full of anomalies, and information regarding it seems hard to get. Apparently a large section of the community will derive no benefit at all, and it will undoubtedly increase the cost of production. The Government is being severely criticised for pushing it through in spite of so much opposition. It appears to be a very cumbersome, vexatious way of raising the necessary money, and the cost of administration will be heavy.

The Tasmanian Producers' Organisation held its annual conferences in various centres during August and early September and many matters concerning primary producers were discussed fully, and numerous resolutions passed. Matters pertaining to the fruit industry were mostly confined to the Launceston and Hobart meetings.

The chief items dealt with under this heading were: **To alter the present system of electing the State Fruit Board** from the group system (3 members from the north and 6 from the south, as at present), to 9 separate districts with one member each. It is considered that under the present system the whole of the representation gravitates to the more populous centres, while the outlying districts have no chance of getting their chosen representative in, consequently they feel disfranchised, and lose interest. The group system may work equitably where there are parties as in politics, but not where the vote is largely a geographical one.

Apple Export Regulations.

The interpretation of the regulations with regard to **mis-shapen Cleos** and russeting on several varieties was dealt with in the following motion by Mr. Ellis Dean, seconded by Mr. A. Roddam, "That we consider the interpretation of the Oversea Regulation has been too technical and severe, especially with regard to russeting and mis-shapen Cleopatras and roughness round the stalks of Cox Orange Pippin, Dunns and Worcester Pearmain, etc., and we request the State Fruit Board to take the matter up with the proper authorities with a view to getting a more commonsense interpretation in future, as under the present interpretation the varieties specified are no longer payable." This was carried unanimously.

As complaints are common about the same thing in South Australia, I hope they will move in the same direction. All regulations of this kind should have commercial value as a standard, not ideals.

Moved by Mr. C. O. Smith, seconded by Mr. Ellis Dean, "That the State Government be asked to indent pine cases and wrapping paper for growers' requirements, and also give more liberal assistance in financing growers using hardwood cases." Carried unanimously. It was pointed out that by doing so it would be possible to get reciprocal agreements with countries supplying pine cases and paper by which they would take Apples and Pears in exchange, thus getting over the financial obstacles to business.

The following resolution previously passed by the other conferences was endorsed at Hobart.

That the Federal and State Governments be urged to introduce the necessary enabling legislation to give effect to the principle of producer control of marketing as enunciated at the Empire Conference." Carried. It would then be optional on the part of any industry to form a Control Board, not compulsory, as under the present Federal proposals.

Several other matters of purely local interest were dealt with.

APPRECIATION FROM NEW ZEALAND.

The Editor,
"Fruit World."
Sir,

In forwarding my subscription I should like to take the opportunity of expressing my appreciation of your publication. I have had twenty-four years' experience of fruit growing over here, first as a grower, and of recent years, in the cool storage side of the industry, and find much valuable and interesting information in your pages. (Signed) "W.O." Motueka, N.Z.

Tasmania

APPLE PROSPECTS GOOD, ESPECIALLY JONATHAN — PEST AND DISEASE CONTROL — REWORKING APPLES AND PEARS — PACKING CLASSES APPRECIATED.

THE Minister for Agriculture (Mr. R. Cosgrove) is in receipt of the following report from the Chief Horticulturist relative to the condition of orchards throughout the State.

Weather and Crops.

Very variable weather was experienced during the past month, but throughout all fruit growing districts the rainfall was light and in consequence good progress was made with pruning and the application of dormant sprays. Cultivations have, however, been held up in some localities where the soil has set and become almost unworkable. It is evident that the variable temperatures, together with the warm Autumn, is likely to be reflected in later blossoming. "Green tip" spraying is from 9-14 days later than last year. Rainfall records obtained through the Commonwealth Weather Bureau indicate the position in the various fruit centres—Hobart 111 points compared with the average of 185; Franklin 93 compared with 312, and Launceston 148 compared with 296 points.

A good showing of fruit buds is evident throughout, with Jonathans outstanding and Cleopatra, Scarlet and Crofton variable.

Growers have paid considerable attention to **manuring,** and where heavy crops were taken last season application of blood and bone, augmented by chemical fertilisers should serve to ensure conditions suitable to satisfactory set and development. Borax has been used extensively where "crinkle" was prevalent last season.

Spraying and Pests.

As mentioned in last month's notes, dormant red oil applications for Red Spider control were found necessary in many localities and strengths of 1:12 or 15 appear to have achieved their purpose; a number of growers still appear to favor 1:20 applications in conjunction with the "green tip" Bordeaux, though it has been pointed out that this is much less effective.

An increase is again noticed in the number of **stationary spray plants** and the efficiency and economy of these is being widely recognised. Closer permanent mains and laterals, together with closer taps and shorter hose lengths are being adopted.

Appreciation has been shown by growers of the work of the Department in the destruction of abandoned and neglected orchard areas. Many District Instructors are now proceeding with the inspection of pesticides under the new regulations, and analyses of spray samples are being obtained. It is proposed to publish details of these at a later date. In connection with this phase it should be mentioned that the registration of most pesticides has now been completed and manufacturers, with few exceptions, have readily supplied detailed analyses of their products.

With the commencement of the spraying season a large demand for Bordeaux testing paper has been experienced; should any growers require spraying charts, testing paper or other information this can be obtained from the District Inspectors or on application to head office.

Reworking.

The **grafting of Pears** is already in full swing, with a large demand for scions of the varieties **Winter Cole, Doyenne du Comice and Packham's Triumph.** Apples have been commenced in a few districts and it is noticed that growers, owing to the prevalence of "Dieback," are carrying out very little shortening of the framework branches. Some "chisel" grafting is being carried out, whilst this may be more rapidly performed than other methods of refurnishing, the likelihood of "Dieback" and the weak union which so often result are drawbacks of a really serious nature. The "V" bark graft is very simply performed and is strongly recom-

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mended in preference. A bulletin on grafting methods recently published may be obtained on application; this includes full information on systems, materials and disinfectants used to combat "Dieback" disease.

Stone Fruits.

A medium blossoming of Apricots took place during fairly favorable weather and though hot winds early this month caused very rapid petal fall, a fair set seems probable. Peaches, on the other hand, promise heavy blossom and under normal conditions, should set heavily.

Berry Fruits.

The dry conditions have assisted growers in their Spring plantings of Strawberries, and Autumn beds are moving away rapidly. Cultivations are well forward for the time of year. Gooseberries are in full bloom in many areas and look particularly well; Currants seem backward, though the premature bud burst reported in Autumn has produced less serious results than anticipated. Where anthracnose was troublesome last season, diseased cane tips should be removed without delay and Bordeaux mixture applied.

Packing Classes.

Competition is becoming very keen amongst school children with the approach of the Hobart Show, and the choice of representative teams. Many of the pupils have made rapid headway and practice the various packs at home. A large number already know every pack, size and count by heart, and show great confidence in tackling the different shaped varieties.

NEW APPLE VARIETY—LEGANA.

Favorable Reception in England.

INTERESTING INFORMATION has been received by the Australian Apple and Pear Council from the Department of Commerce regarding the new Tasmanian Apple variety, "Legana." The information was compiled by Mr. P. H. Thomas, Chief Horticultural Officer, Tasmanian Department of Agriculture, and tells of a trial shipment of Legana Apples from Tasmania to England. The consignment was 66 days in transit, and arrived in excellent condition.

Advices received indicate that the new variety was very well received generally. Several of the firms were enthusiastic regarding this Apple, particularly as it arrived at a time when the market was practically clear of highly colored Apples. However, one firm expressed the opinion that the quality was below the average Jonathan, and they did not think it would ever become extremely popular, adding: "Before any extensive acreage is turned over to the Legana variety, we would suggest that further experiments should be made with the McIntosh Red variety, which is tremendously popular here." Referring to the prices of from 14/- to 17/- per box, with an average of 15/-, the firm stated that these were made in exceptional circumstances. Other opinions were:—

"Legana Apples arrived in good, clean, firm condition, highly colored. It has a distinctly promising future."

"Legana Apples arrived in excellent condition; of good color, well formed, and of good flavor. They sold at excellent prices. Future prospects bright."

"Apples arrived in good hard condition, no sign of bruising. Flavor somewhat similar to Delicious. Will probably not become so popular as McIntosh Red."

"Legana Apples a good variety; should prove popular here if not quite so large. They strongly resemble a New Zealand Doherty and should meet a similar market for selling."

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U.S.A. CROP PROSPECTS.

Latest reports issued by the U.S.A. Department of Agriculture contain the following:—

Apples: For the entire United States the forecast is 134,867,000 bushels, as compared with 211,060,000 bushels in 1937, and 117,506,000 in 1936. Other important Apple States show the following August 1 forecasts in thousands of bushels:—New York, 15,435; New Jersey, 4,249; Pennsylvania, 8,932; Ohio, 4,030; Illinois, 4,032; Michigan, 6,930; Missouri, 392; Maryland, 2,194; Virginia, 10,320; West Virginia, 5,520; Arkansas, 338; Idaho, 4,063; Montana 568; Colorado, 1,982; Utah, 478; Washington, 31,590; and Oregon, 3,978.

The total California Apple crop is now estimated at 7,011,000 bushels. This is a slight advance from a month ago, based on higher reported condition in important producing areas. Recent years' production estimates have been 10,292,000 bushels in 1937; 8,922,000 in 1936; 9,889,000 in 1935; and 6,500,000 in 1934.

Apricots: The August 1 California Apricot forecast of 180,000 tons is much below earlier indications for the crop. Heavy producing areas show large condition losses during the month and report a remarkably heavy late drop. This small crop compares with the production of 311,000 tons in 1937; and 248,000 tons in 1936.

YOUNG FARMERS' CLUB.

Melton Activities.

Among the varied projects of the Melton club are pasture plots to discover the suitability of different grasses for the district, which has an average rainfall of less than 15 ins. The head teacher (Mr. W. Roberts), states that 12 beds 6 feet by 3 were planted in June last, with sub.-clover, prairie grass, Chewing's fescue, white clover, Rhodes grass, Colac perennial rye, paspalum dilatatum, alsyke clover, bird's foot trefoil, wallaby grass and phalaris tuberosa.

Cabbage beds are studied with pecuniary interest, since 160 Cabbages grown by club members last year returned a profit of 25/-. Twelve varieties of Eucalyptus have been planted. Included in the other projects are three pure-bred Jerseys (two heifers and a bull); three grade cows, a pen of poultry and two pet lambs.

VICTORIAN NEWS AND NOTES

Goulburn Valley Notes

PROSPECTS GOOD FOR PEACHES, BUT APRICOTS LIGHT.

SHORTAGE OF WATER — PARASITES TO CONTROL PEACH MOTH — RETURN OF MR. W. YOUNG.

By Our Correspondent.

THE very dry weather experienced in the Goulburn Valley during the past month, has had a disastrous effect on the crops and pasture lands. On September 16 and 17 heavy wind storms, with gales, swept the countryside, doing a considerable amount of damage to gardens, etc., and a drying out of the soil; only 1 point of rain was registered.

Fruit Prospects.

The Peach orchards have blossomed well, indeed, much better than was expected earlier in the season. The dry Winters always seem to be especially suited to the Peach tree in the Goulburn Valley.

Golden Queen, Pullar's Cling and Thiele Cling Peaches are expected to carry fair to good crops, while Phillips Cling, Sims Cling and other mid-season varieties will only be fair to medium.

Moorpark Apricots have been disappointing and have only set a light crop. This variety is fast going out of favor with the canners, on account of its unevenness in ripening, and it is also so difficult to get the bright color, which is so essential in the export pack.

Trevatt, Blenheim and Tilton Apricots have blossomed fairly well and should carry fair crops.

All varieties of Pears are showing up well, and have now reached the green tip stage, and this week growers have commenced spraying with Bordeaux mixture for Black Spot. This spray has proved very effective when done thoroughly at the right time.

Irrigation.

Great concern is being felt by land owners in the Goulburn Valley at the shortage of water for irrigation supplies during the coming season. The State Rivers and Water Supply Commission have made it clear that only water rights will be supplied, and that no excess water sales will be available unless heavy rain falls in the catchment area, and that the greatest care is to be taken to see that no water is wasted.

Protests have been made by fruitgrowers against the proposal to supply Bendigo and district from supplies pumped from the Waranga channels at a time when there is not sufficient water to supply the needs of the Goulburn Valley. While the greatest concern and sympathy is felt for our fellow fruitgrowers at Harcourt in their serious plight, with no water to irrigate their orchards in the coming season, it is generally felt that it would be impossible for the Water Commission to give any assistance from the Waranga Basin in a year of such acute shortage. Moreover, the costs would be prohibitive, for it is estimated the water from the Waranga channel would have to be pumped to a height of 500 feet and carried to Bendigo in pipes. The city of Bendigo is situated on a range of hills.

The Water Commission turned the water into the channels on September 15 for the purpose of irrigating pastures and crops. Fruitgrowers have been advised to hold off irrigating for as long as possible, and so conserve their water rights for the hot Summer months, when the water is so urgently needed.

The flow in the Goulburn is less than it was in the last drought year of 1914. There has been no floods in the river during the last three years, and the Murray River is said to be the lowest on record. There have been no heavy rains in the Hume Catchment Area for over two years. What is needed is another storage basin on the Goulburn system, to meet the ever-increasing demand for water. Each year the channels are gradually creeping farther north, making greater demands on the present system.

Commonwealth Scientific and Industrial Research.

About three weeks ago Mr. G. Helson and staff arrived back from Canberra to continue their research work in their laboratories at Mooroopna in connection with the **Oriental Peach Moth.** Field work has also commenced. Lures have been placed in different orchards throughout the district, and the first catch of moths has been made, nearly three weeks earlier than usual. A specially air-conditioned brooder has been constructed at the laboratories for hatching purposes, and some very interesting experiments are being carried out.

Parasites Arrive.

A shipment of parasites imported from the United States was landed in Melbourne and brought to Mooroopna recently by Mr. G. Helson, Research Officer of the C.S.I.R. The shipment contains 21,000 cocoons of the Oriental Peach Moth, the parasites being contained in the cocoons.

The parasites include three varieties, two native to the United States and one indigenous to Japan. The American species are Macrocentrus ancylivorus and M. delicatus respectively, the first having been introduced into the Goulburn Valley in 1935, the second, which is prolific in Ohio, is new to Australia. The third species, Inareolata molestae, is a native of Japan, but has been bred in the United States for some years.

The particular parasites which have been included in the present shipment were bred in Moorstown, New Jersey. The shipment has been placed in quarantine in Mooroopna, and as the parasites emerge they will be liberated in the orchards.

Fruitgrowers' Representative Returns.

On August 26, at the Shepparton Hotel, Shepparton, a representative gathering welcomed home the delegate of the Northern Victoria fruitgrowing industry, Mr. W. Young, on his return from London after having been abroad to watch the interests of the industry during the recent trade talks in England.

Mr. Young, in responding, said he was glad to be back home among his friends. He was in a difficult position, and was more or less tied by the absence of Cr. Fairley. The first move must come from the Government, he said. He could tell many things that would interest listeners deeply, but could not do so at the present time. Mr. Young said he was amazed at the amount of fruit that was grown in England.

Mr. W. Young's services to the fruit industry generally and the canning industry in particular is deeply appreciated by every fruitgrower in the Goulburn Valley. They realise that they are particularly fortunate in having a leader with such outstanding ability and foresight to watch the interests of the industry at home and abroad.

Fruit Exhibits at Royal Melbourne Show

APPLES THE OUTSTANDING FEATURE — GOOD QUALITY EXHIBITS.

THE DISPLAY of fresh fruit in the Pavilion at the Melbourne Royal Show was particularly pleasing, the whole of one side of the Centenary Hall being required to stage the exhibits. Apples and Pears were particularly strong classes and in the Apple division great interest centred in the schools packing competition, in which the judge highly praised the exhibits. The shield in this section was won by Pakenham Upper, with Harcourt North second and Hastings third. In the Young Farmers' Club packing competition the shield went to Pakenham North, with Pakenham Upper second and Pakenham North third.

A much improved display of citrus resulted from the efforts of the V.C.C.A. to encourage exhibitors, and the quality of the fruit grown was excellent. In the export section fruit stored for five weeks opened up in first class condition.

Awards in the various classes were:—

Fine Apple Display.

Regarding the Apple and Pear displays, the judges' comments were that it was the best display they had seen for a very long time. A feature was the large entry in the schools Apple Packing Competition, in which the judge made special reference to the general adoption of the bulge pack, which he commended. The competition was particularly keen and in many sections awards were won by very narrow margins. Prize-winners were:—

Apples.

Dessert: W. H. and D. F. Calvert, 1 and 2; J. D. Grant, 3. Culinary: C. A. Bertuch, 1; W. H. and D. F. Calvert, 2 and 3. Dunn's Favorite: C. A. Bertuch, 1 and 2; W. H. and D. F. Calvert, 3. Stewart Seedling: A. J. Upton, 1; J. D. Grant, 2; W. F. Bowe, 3. London: A. Thiele, 1 and 2; C. A. Bertuch, 3. Granny Smith, 2¾ in. diameter: C. A. Bertuch, 1 and 2; A. Thiele, 3. Granny Smith, 2¾ in. diameter: R. A. W. Bailey, 1; A. Thiele, 2; C. A. Bertuch, 3. Granny Smith, 3 in. diameter: E. Thiele, 1; A. Thiele, 2; C. A. Bertuch, 3. Warrior or Red Statesman: J. D. Grant. Sturmer: W. H. and D. F. Calvert, 1 and 2; C. A. Bertuch, 3. Stone Pippin: W. H. and D. F. Calvert, 1; W. Rehn, 2 and 3. Rome Beauty: C. A. Bertuch, 1; W. H. and D. F. Calvert, 2; R. A. W. Bailey, 3. Red Rome: W. Rehn, 1; J. D. Grant, 2. Statesmen: C. A. Bertuch, 1; J. D. Grant, 2; L. J. Hobbs, 3. Delicious: C. A. Bertuch, 1; J. D. Grant, 2; R A. W. Bailey, 3. Jonathan, 2¾ in. diameter: C. A. Bertuch, 1 and 2; A. J. Upton, 3. Rokewood: C. A. Bertuch, 1; W. H. and D. F. Calvert, 2; W. Rehn, 3. Yates: R. A. W. Bailey, 1; C. A. Bertuch, 2; J. D. Grant, 3 Culinary, any other variety not otherwise provided for: W H. and D. F. Calvert, 1 and 2; W. Rehn, 3. Dessert, any other variety not otherwise provided for: W. H. and D. F. Calvert, 1 and 3; W. Rehn, 2. Tray of Stewart Seedlings: A. J. Upton, 1; J. D. Grant, 2; W. F. Bowe, 3. Tray of Dunn's Favorite: C. A. Bertuch, 1; W. H. and D. F. Calvert, 2; W. Rehn, 3. Londons: A. Thiele, 1; R. A. W. Bailey, 2; D. J. Grant, 3. Tray of Granny Smith, 2¾ in. diameter: C. A. Bertuch, 1 and 2; J. F. Thiele, 3.

Apple Packing Competition—Shield presented by Fruit Exporters' Handling Committee: Pakenham Upper S.S. (Thelma Black), 1 and shield; Harcourt North S.S. (Thelma Sheehan), 2; Hastings S.S. (Dana Kippi), 3. Competition, Shield presented by the Gerrard Wire Tying Machines Co. Pty. Ltd.: Pakenham North Young Farmers' Club (A. Warner), 1; Pakenham Upper Young Farmers' Club (Marjorie Black), 2; Pakenham North Young Farmers' Club (K. Mathews), 3.

Dried Fruits.

There was no competition in the dried fruits class at the Royal Show in Melbourne. The Irymple Packing Co. was the only exhibitor, winning all first prizes for 6-crown and 4-crown Sultanas, Prunes, Peaches, Apricots, Pears and Currants. The lack of competition was the subject of unfavorable comment, visitors regretting that advantage was not taken of the opportunity to bring dried fruits prominently under notice. Point was given to this criticism by the display, alongside the dried fruit, of a remarkably fine show of fresh Apples and Pears, which occupied two-thirds of one side of the pavilion. Citrus growers also took advantage of the opportunity to obtain useful publicity with a fine show of high-class fruit.

Citrus.

Citrus growers provided a much improved display at the Melbourne Royal Show, compared with that of last year. The V.C.C.A. gave encouragement and assistance to exhibitors, the market representative (Mr. G. K. Kerr) keeping growers reminded of the show.

A very interesting exhibit in this section was that of Oranges packed for export. Exhibits had to be in cold storage for five weeks, and they opened up in excellent condition. The judge remarked on the high quality of the pack, and said that only one wasty Orange was found in the lot. Renmark took first and second honors, with Irymple Packing Co. third.

Citrus Fruits.

Collection of packed citrus fruits open to any Australian citrus growers' association affiliated with central or governing citrus associations, or any grower or growers affiliated with any of the governing associations: Wood Son, Seary Ltd., 1; Irymple Packing Pty. Ltd., 2; Renmark Fruit Growers' Co-op. Ltd., 3.

Oranges.

Washington Navels: C. H. Katekar, 1; E. L. Watmuff, 2, and V.H.C.; H. O. Symons, 3; E. F. Page, V.H.C.; S. E. Donaldson, V.H.C. Late Valencia: R. D. Hollins, 1; W. H. Missen, 2; H. O. Symons, 3; R. K. Rodwell, V.H.C.; P. R. Hollick, V.H.C.; and T. McCarthy, V.H.C. Mediterranean Sweet, Queen White Siletta, Joppa or Jaffa: A. Smart, 1; W. Elliott, 2; C. H. Katekar, 3.

Lemons.

Lemons (Fresh), Lisbon, Eureka (sweet rind) or Villa Franca: E. F. Page, 1; H. O. Symons, 2 and 3. Cured, Lisbon, Eureka (sweet rind) or Villa Franca: E. F. Page, 1; H. O. Symons, 2; L. A. P. Webb, 3. Pomelo or Grapefruit: E. F. Page, 1 and V.H.C.; H. O. Symons, 2 and V.H.C.; H. Sheppard, 3; J. Fletcher, V.H.C. Mandarins: E. F. Page, 1; V. L. B. Roberts, 2; Smart, 3.

(Further Royal Show comments on Page 32.)

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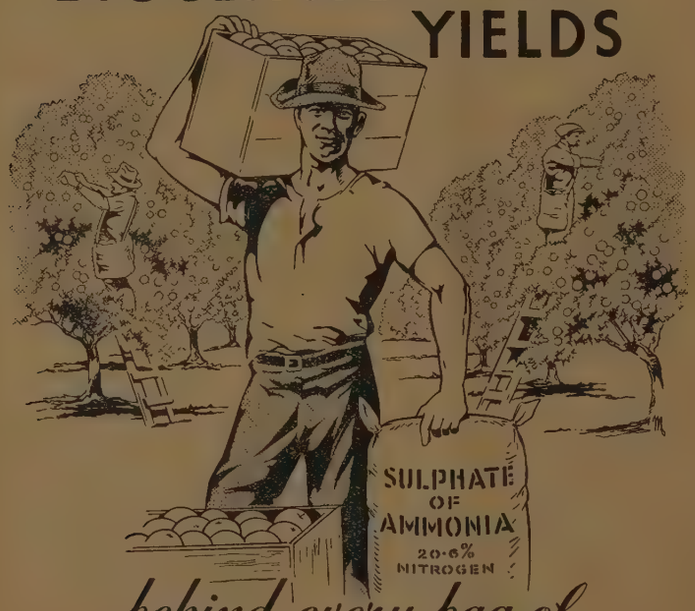

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Canned Fruit News

CANNED FRUIT PROSPECTS.

Heavy Foreign Stocks of Peaches.

Mr. W. J. Adams, Secretary of the Australian Canned Fruits Export Control Board, stated to the "Fruit World" this week, that there was little improvement in the immediate prospects for canned fruits. In order to meet keen competition from California, a reduction of prices had been made in the United Kingdom market last August, but even this had had little immediate effect. However, during the past week or so sales had been better.

Referring to the present position, Mr. Adams said that the outlook was not encouraging. California's record pack had not been cleared, and the holders were left with a very substantial carryover to the new season With another normal crop at hand. endeavors were made to limit the pack in California, but growers did not agree, and in consequence canners were able to buy fruit at a price that represented only about the cost of harvesting. The result was that California faced the prospect of another big carryover. There was a possibility, however, that the Federal Government would take a large quantity for food relief, and if this happened, the position would be eased considerably. The danger was that, with a heavy accumulation of stocks, a break-sooner or later would be inevitable. With supplies plentiful, buyers were very cautious, and bought only in small quantities; they feared to invest largely because of the risk of a drop in prices catching them with heavy stocks. Although it was possible for California to dry a substantial portion of the canning Peaches, it was understood that the Federal Government did not favor that course because the position with regard to dried Peaches would thereby be upset and there would be merely a transferring of the problem from one section of industry to another instead of a solution.

Mr. Adams said that sales of Australian canned fruit for the season were very satisfactory, totalling 1,400,000 cases of Apricots, Pears and Peaches. The statistical position for Pears and Apricots was normal, but the Peach position was far from satisfactory, and until it cleared the prospects were not encouraging.

BIG ORDER FOR DEHYDRATED APPLES RECEIVED FROM ENGLAND.

Canada Benefits.

The forerunner of what is expected to be a heavy demand for dehydrated Canadian Apples from the British Isles, was a recent order from England for £10,000 worth of the dehydrated Apples. It was distributed among the plants in the Annapolis Valley, and resulted in their opening for the production season far earlier than had been arranged for. The £10,000 order was from the British War Office, and it was stated that if the product was equal to the expectation, there would be additional and larger supplies of the dehydrated Apples sought from the valley plants. Ordinarily, the dehydrating of Apples in one of the leading Apple growing areas of the world, does not begin until September or October, but the order from the British War Office, resulted in the early resumption of operations in the food plants. — "Canadian Food Packer."

CANNED PINEAPPLE JUICE.

A New Delicacy from Queensland.

AFTER conducting a series of experiments, a leading Queensland canning company is now producing canned Pineapple juice, a pure beverage without artificial colouring, preservative, or flavoring.

The Pineapple occupies a high position among the most delectable fruits of the world, but recently a select committee in America rated this fruit seventh, a rare distinction indeed when it is realised that the fruit produced in Queensland has been found to compare more than favorably with that grown in other countries of the world. This canned juice contains all the essential and characteristic properties of this delicious fruit, and in the processing infinite care is taken to preserve to the fullest extent the natural refreshing and piquant flavor that so delights the palate.

"Health Drink of a Nation."

Apart from being a particularly attractive drink, the juice has other properties no less valuable. The medicinal value and health-giving properties are real facts, containing as it does essential vitamins and such vital minerals as calcium, iron, phosphorus, manganese, etc. Truly has it been named "The Health Drink of a Nation."

The uses to which this juice may be put are many and varied. Taken alone it provides a delightfully pleasant and energising beverage. The juice may be used as a base for pure fruit cocktails and will certainly give added zest to many of the spirituous liquors. Convenient sizes are packed for the householder and for bulk users, sundae shops, milk bars, etc.—"Australian Food Manufacture."

ASPARAGUS GRADES AND PRICES FOR ONTARIO, SEASON 1938.

The following grades applied for Asparagus for canning purposes this season in Canada.

No. 1. To be not over 6 in. in length. Not less than ⅝ in. in diameter. Stalks to be reasonably straight. No broken or spreading tips. Practically free from white woody butts, rust and insect injury.

No. 2. Minimum ¼ in. in diameter. Somewhat open heads, green throughout, not necessarily straight, practically free from rust and insect injury.

Ungraded. Shall be no more than 10 in. in length, not under ¼ in. diameter. Practically free from white woody buts, rust and insect injury.

All above-mentioned grades shall be subject to 10 per cent. tolerance. In the event of dispute as to grade a Government inspector shall be called in and his inspection shall be made in accordance with this agreement, his decision shall be final.

The negro had pleaded not guilty to the charge of stealing chickens.

"Have yon any witnesses to call?" the magistrate asked him.

"Well, sah," replied the prisoner, "it's easy to see dat you doan' know nothing' 'bout stealin' chickens. A man never takes witnesses along with him for a job like dat.'

New South Wales News and Notes

Murrumbidgee Irrigation Areas

MORE CULTIVATION, LESS IRRIGATION — GOOD PROSPECTS FOR APRICOTS, PEACHES AND NECTARINES — PHILLIPS CLING (BYRNE'S STRAIN) AND GOLDEN QUEEN ARE POPULAR CANNING PEACHES — SUBSTANTIAL CITRUS EXPORT TO N.Z. — IMPORTATION OF ORANGES INTO N.S.W. FROM PALESTINE OPPOSED — HINTS ON TOMATO CULTURE — FURTHER PLANTINGS OF CITRUS TREES ON M.I.A.

By Our Correspondent.

RAIN during the earlier portion of the month has had the beneficial effect of holding off any Spring frosts, but during the past week slight frosts have occurred, but so far no damage is known to have been caused.

The **first irrigation** of the season is now on, and although some growers are availing themselves of the opportunity to soften up the land before ploughing in the heavy crop of Crowfoot and Trefoil which has grown during the somewhat wet Winter, the majority are passing the first rotation by, and are finding that the soil, although having a hard crust, is full of moisture underneath.

While it is certainly advisable to have the soil in a good State of moisture in the early Spring before the blossoming period, yet the irrigation must be used with care, otherwise a heavy fall of rain, which sometimes occurs in these districts, may prove detrimental, if coming on top of a heavy irrigation.

The weather is likely to be changeable during September and early October, according to the records of previous seasons, and often a severe drop of newly-formed fruit is caused by the variation of sap flow following a sudden change of temperature.

Where young trees are making strong new shoots, it is not advisable as a general rule to give too heavy a watering, for the strong growth is an indication that the lower rootlets are receiving sufficient moisture to make the necessary top growth.

Often where the costs of irrigation are cheap the water is used too freely, and **insufficient cultivation** is done, but if trees are kept well worked and the soil free and open, often better results will be obtained from holding back the water, specially in cases where in the previous season the vines or trees have made particularly strong and vigorous growth.

Some growers whose land is always well cultivated prefer to hold off the irrigation until well after the flowering of the vines, and in tests carried out by the Viticultural Branch on **Ohanez Grapes**, this practice was found to be very advisable, an excess of moisture at this critical period often causes a bad shedding of the Berries when accompanied by a sudden change in weather conditions.

The **Apricot** trees have not shown a heavy blossoming this season, but this is really no indication of the setting of the ultimate crop, as the **Trevatt Apricot** is inclined to blossom irregularly, and it has been noted that in some years trees showing a somewhat meagre show of flowers have finished up with a farly good crop of well-sized fruit, thus making up in weight what was lacked in quantity.

Last season some very heavy crops of Apricots were harvested, and it may prove a lighter season for this fruit, although it is as yet far too early to judge.

Peaches and Nectarines are flowering profusely, and given satisfactory weather conditions, there should be a good setting.

Generally it is necessary to thin out both Apricot and Peach crops fairly heavily in order to obtain large-sized fruit, as the fruit is inclined to cluster on such varieties as are grown on these Areas, and although with the Pullar this is not so obvious on account of the larger size this fruit attains, yet with Golden Queen there is often a tendency for the fruit to run small unless well thinned out.

The **Phillips Cling Peach** (Byrnes strain) is one which has grown greatly in favor during past years, and this variety, together with the **Golden Queen,** are now the two main varieties being planted. The Pullar, although admittedly a very fine Peach and a splendid canner, is stated to be out of favor as an export tinned product on account of its red centre, yet with the constant changing tastes of public opinion it is quite possible it may again come into favor, for its flavor when bottled or canned is hard to beat, if processed at the correct period of maturity.

Citrus Export.

The Washington Navel crop is now finished, and Valencias are now being taken into the various sheds for testing, and in some cases are quite up to the required standard.

The figures for export to New Zealand of Washington Navels from the various Griffith Sheds are as follows, up to September 15:—

	Export Cases, 1⅛ Bush.
Griffith Producers Co-operative Co.	44,245
Craig Mostyn Packing Co.	2,253
Selbest Packing Co.	1,490
Area Packing Shed	1,584
Murrumbidgee Packing Co.	1,856
Total	51,428

Oranges exported from Leeton to N.Z. up to September 21 were:—Navels, 39,559 cases and Commons, 1,825 cases.

All packs from the different sheds have been very good, and very few rejections have occurred at ships' side, speaking well for the strict supervision of the Fruit Inspectors, and the management of the sheds in question.

Oranges From Palestine?

Some consternation is felt among citrus growers at the announcement in the "Sydney Morning Herald" of Monday, Sept. 19, which prints a short article stating that three consignments of Palestine Oranges were expected to arrive in Sydney towards the end of the year, and the article further states that the following telegram has been sent to the Prime Minister, Mr. Lyons, from the Coastal Citrus Growers:—"Information received by the Central Coast District Council indicates shipments aggregating quarter million cases Palestine Oranges arriving Australia end of year. Growers urge Government investigate immediately, and if correct take steps protect Australian citrus industry."

It behoves citrus growers on the Murrumbidgee Areas to also take urgent action in this matter, as the importation of such a consignment of citrus would be a most serious blow to the Valencia growers throughout the whole State.

Citrus from Palestine, mostly Grapefruit, has been imported during past years in small quantities, and the writer saw this type of citrus in a shop in Hay retailing at 7d. a piece during March of this year, but then the supply of local fruit was scarce, and no great demand exists for Grapefruit, although it is increasing in favor every year; yet the importation of such a quantity of Oranges from outside sources in competition with our present Valencia crop is a most serious situation, and it wants tackling at once by those in authority to deal with such matters.

With the heavy costs of production at the present time and the constant necessity of fumigation on these Areas to combat the Red Scale, the lot of the citrus grower is not an enviable one, and if he has to further contend with importation of fruit grown by cheap native labor, then the fate of many small growers would be inevitably sealed; Oranges at present are not realising any fancy prices, and had it not been for the New Zealand market as an outlet for a very large proportion of the present crop, the price for citrus would have been far lower than it already is.

Many growers have in recent years turned their attention to the growing of catch crops to augment their returns from the farms, and in some seasons very fair prices are obtained if the season is favorable and weather conditions in Sydney are good.

Many thousands of crates of **Rock Melons, Cantaloupes and Tomatoes** were shipped away last season, and during the coming season, it is stated that Sydney canners will require a thousand tons of the canning varieties of Tomatoes.

The contract price offered is £6 per ton delivered at the Griffith Producers Cool Stores.

Tomato Culture.

Mr. H. A. Fraser, the Agricultural Instructor stationed at Griffith, delivered an interesting lecture on the growing of Tomatoes, to interested growers during the week.

Mr. Fraser advised the first sowing to be made during the first weeks in September, with several sowings of seed in rotation so as to avoid overproduction at picking time.

Mr. Fraser stated that the worst feature of soil preparation on the Irrigation Areas was the shallow depth of ploughing. Tomato ground must be deeply ploughed in order to obtain the maximum results. The crop required a long fallow, with thorough working, and a base dressing of cwt. 5 per acre of equal parts of bone dust and superphosphate.

The seedlings should be planted out in single rows, only on the sunny side of an irrigation furrow.

The width of planting on the rows should not be closer than 4 ft. 6 in., and the plants should be placed two feet apart in the rows.

It is necessary to spray the crop regularly with Bordeaux Mixture to control fungus disease, and when the crop has been in the field for a short period it should be thoroughly dusted or sprayed with sulphur and arsenate of lead to control Tomato Mite and grubs.

Some extraordinary crops of the small Pear-shaped Tomato were grown last season, and although the price offered is not a large one, yet with prolific crops it may be made to pay.

The plants are staked and wires run through the stakes to form a light trellis and this particular variety of Tomato appears to be admirably adapted for this mode of culture.

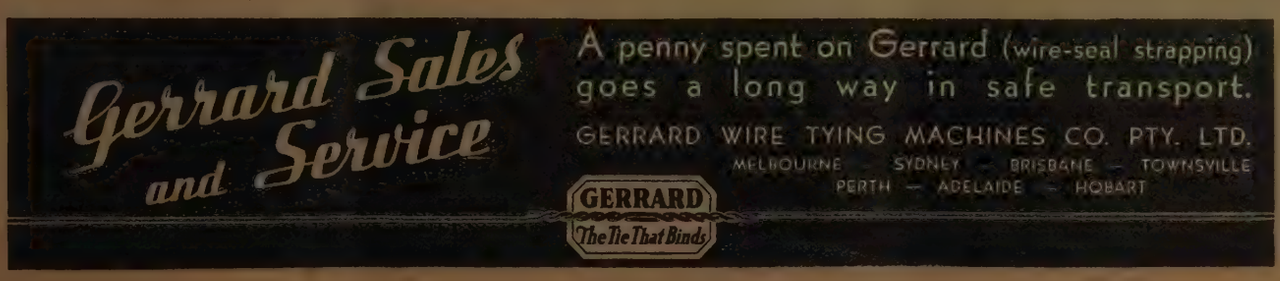
During the month, the third year students of Hawkesbury Agricultural College, under the leadership of Mr. B. Doman, B.Sc., As.P., H.D.A., paid their annual visit to these Areas, and found much of instructional value to interest them.

The party of about 40 students arrived in a special carriage, and after a comprehensive tour of the Griffith Area were conveyed by motor bus to Leeton.

Departmental Officers conducted the tour round the different areas, and Lucerne growing under dry conditions was a special feature of interest on Mr. Burcher's Mallee farm at Eastholm. From this dry area the party was conducted to the irrigation farms of Messrs. Cunninghame and Gibbs in the Warburn Area, and the contrast was amazing.

The **pasture and lucerne paddocks** carrying their flocks of fat sheep was indeed a revelation as to what can be accomplished in a few years under irrigation, and when one realises that these farms are as yet far from being fully developed, then the great possibilities of the surrounding districts is amply demonstrated to anyone with the vision necessary to comprehend to what an enormous extent the stock industry can be extended, and a national fodder reserve established against times of drought, in other areas.

Undoubtedly the irrigation water will ultimately be carried farther afield, and by a judicious utilisation of the natural watercourses of the country, now in many years merely dry creeks, the life-giving fluid from the various rivers will be conducted throughout the back country, and


Gerrard Sales and Service
A penny spent on Gerrard (wire-seal strapping) goes a long way in safe transport.
GERRARD WIRE TYING MACHINES CO. PTY. LTD.
MELBOURNE — SYDNEY — BRISBANE — TOWNSVILLE
PERTH — ADELAIDE — HOBART
GERRARD
The Tie That Binds

Production of Natural Fruit Juices

Distribution, Concentration and Production

(By Dr. T. H. Harrison, Commonwealth Fruit Officer in London.)

Part 3—Continued from Page 27 of September "Fruit World."

[In the August and September issues of the "Fruit World," parts one and two of the report by Dr. T. H. Harrison, Commonwealth Fruit Officer in London, were dealt with. These include a description of the amazing advance in the last five years in the production of natural fruit juices; information regarding raw material, equipment, clarification, storage, sterilization, bottling, etc. After describing the labelling and packing in our last issue the article continues as follows:—]

Distribution.

In Germany and Switzerland, sales are so extensive that special fruit juice bars, of the nature of milk bars, have been developed at all centres of population movements. These are supplemented by sales at all restaurants, cafés, etc.

In England, where the sale of Apple juice is still in its infancy, three different channels are employed—

1. The chain store organisation of Boots and Co., chemists and druggists.
2. The large retail stores, such as Selfridges and Harrods.
3. Direct distribution from factory to consumer.

For Australia, various channels of distribution are suggested for consideration.

(a) The fresh milk distributing companies in the large cities. Through them, juice would flow to all milk bars, railway refreshment rooms, restaurants, cafés, etc.

This channel would appear to offer outstanding advantages, because these companies have the necessary technical knowledge, staff and equipment to enable them satisfactorily to undertake bottling from bulk. Fruit juices would supply them with another valuable liquid food which would be complementary to, not competitive with, fresh milk. The elaborate machinery of distribution, sales recording, etc., already in existence for fresh milk could thus be made available for fruit juice virtually free of cost. It is considered that the large fresh milk distributing companies might be induced to assist financially in the production of Apple juice in selected centres of Apple production. It is possible that some of the equipment already available for moving bulk supplies of milk might be adapted to move bulk supplies of juice from production to bottling centres, especially as fruit juice would be available mainly in periods of low milk production.

(b) Through large retail stores in each of the large cities.

(c) Through retail grocers' shops.

(d) Through retail chemists' shops.

(e) Through "soft" drink shops and soda fountains.

Each of the last four groups collectively has contact with large numbers of prospective consumers of an article which could be honestly advertised as a food, a preventive medicine, and a palatable, thirst-quenching drink.

Two channels of distribution not recommended for distribution of fruit juice are—

(f) Licensed houses, hotels, etc.

(g) Wine bars.

It is considered that, while each of these would be able to dispose of a certain quantity of the unfermented fruit juice, their prime interest would be the sale of a competitive drink, and hence they would be likely to "damn with faint praise" the fruit juice to which the public must become accustomed.

In general, the public will be interested in retail quantities, either supplied in bottles or drawn from containers of a size compatible with quantities normally consumed in a relatively short period. In this outline, it is sufficient to indicate that the juice must either be bottled before leaving the centre of production, or forwarded in bulk to a consuming centre, where it would be bottled. For the safe transport of bottles, cardboard or "fibreboard" containers are used satisfactorily in England. These are supplied in the flat at approximately 2d., 4d. and 6d. each for the 6½ oz., 13 oz. and 26 oz. bottles, respectively—each container to take 1 dozen bottles. Samples could be obtained if desired. For transport in bulk, three types of containers appear to be available—

(a) Glass-lined or enamelled steel containers, such as are used for distribution of milk, etc.

(b) Casks or steel drums with inside surfaces suitably treated.

(c) Glass or earthenware containers, "Carboys," or modified milk or cream cans.

The details of treatment to be given in each case will depend upon whether the transport container be used for accumulating the juice, or merely to transfer sterile juice to a bottling depot. In the first case, the container must be subjected to treatment ensuring sterility and stability of the juice, and the contents need not be bottled immediately. In the second, however, bottling should be completed within 24 hours. Resterilising of the juice before or after bottling will be necessary.

Concentration.

The cost of transporting large quantities of fruit juice in bulk, over the long distances which separate certain centres of production from large centres of population in Australia, may compel attention to be given to concentration. This may be achieved by two methods—

(a) By freezing.

A continuous process has recently been developed by Krause, of Germany, although not commercially employed at present. Juices can be concentrated almost down to the eutectic point without loss of flavor or nutritive value. The degree of concentration varies according to the constitution of the juices, but for most Apples it is safe to assume that a concentration of 4:1 could be obtained.

(b) By heat under vacuum.

This is efficient, but doubts are expressed regarding ability to avoid impairment of nutritive value and flavor of the juice treated. Full details of each method are being obtained, and will be forwarded in due course.

Costs of Production.

In view of the many variables indicated in the foregoing, it is not considered practicable to give costs of production without itemising details of equipment, for which only continental or English prices are known. It is, therefore, considered that it is more advisable at this juncture to consider the sale of fruit juice as a method of disposing of Apples purchased at a figure giving a fair return to the grower, and likely to stimulate his interest in, and encouragement of, the Apple juice industry.

The figure of £5 per ton for second grade Apples is considered reasonable for this purpose. In fact, as this represents 2/- per bushel case naked fruit to the grower, there are many growers in Australia at present who would be glad to dispose of the whole of their crops at this figure.

As indicated above, 150 gallons of pure fruit juice per ton of fruit can be expected. This represents 8d. per gallon for the cost of raw materials. In England, bottles used contain approximately 6½, 13 and 26 fluid oz., running 24, 12 and 6 respectively to the gallon. It is considered that a price of 3d., 6d. and 1/- retail per bottle could reasonably be expected in Australia. (An extra charge would need to be made for the bottle, for which, in England, the first cost is approximately 1d., 2d. and 3d. each respectively.) This represents the equivalent of 6/- per gallon. Allowing for 50 per cent. spread between wholesale and retail prices, the above figures would represent 4/- per gallon wholesale.

One firm operating in England considers that all of its costs of production do not exceed 1/- per gallon. Another, utilising expensive equipment, and employing technical assistants, estimates that costs may go to 2/- per gallon. Such factors as the length of period during which a fruit juice factory is operating, the extent to which capital outlay for buildings, etc., is to be included, the type of plant employed, the extent to which technical labor is employed, the way in which overhead charges are shared, as in packing houses, would all effect this cost.

All the evidence available from England and the Continent indicates clearly that, after making all possible allowances for every item relevant to cost of production, Apple juice in Australia can be produced economically, distributed satisfactorily, and yet sold at a figure strictly competitive with other available drinks.

By-products.

Cider makers, who have thoroughly explored the possibilities of utilising the pulp, or pomace, remaining after juice extraction consider that there are two main outlets for this material—

(a) For pectin production.

One ton of Apples will yield approximately 700 lb. of wet pulp with a moisture content of 50 per cent. This material rapidly ferments, and must be used immediately for pectin production, or dried for sale — the more usual course in England. Drying is done in special pulp dryers, which consist usually of revolving drums, steam heated, and fitted with flanges to carry the drying pulp slowly over the drums. The dried product has usually a moisture content of 8-10 per cent., and represents above 60 per cent. by weight of the original wet pulp. This means that a yield of approximately 400 lbs. of dried pomace is obtained per ton of fresh Apples.

In England at present this material is sold to pectin manufacturers for £8 per ton, thus the market value of dried pomace yielded by one ton of fresh Apples is approximately 28/- gross, out of which costs of drying and bagging must be paid.

The pectin content of the dried material varies from 10-15 per cent., but all this is not obtained by normal extraction methods, which will be described separately.

(b) For stock feed.

In an attached sheet is given an analysis of Apple pomace which forms a means of estimating its feeding value.

Used in mixed rations, to the extent of about one-sixth of the total, it is considered to have a superior feeding value to that of root crops for dairy cows. In the dried form it can be used in conjunction with other meals, which preferably have a higher nitrogen content.

For Australia it would appear to have certain possibilities in the dried form as a relatively cheap stock food, but might well form the basis, and provide the bulk, of a composite meal of considerable feeding value. Australian investigations upon this matter are required.

Further details appear in the journal of the Ministry for Agriculture and Fisheries, Vol. XXII., 9, December, 1915, and ibid. Vol. XL., 8, November, 1933.

Centres for Apple Juice Production in Australia.

It is considered that Apple juice factories could be established in each of the States wherever large concentrations of Apples are readily available, and be so worked that they would remove from the fresh fruit market—

(a) Unpopular varieties;

(b) Fruit of low grade;

(c) Culls from packing sheds.

In addition, existing factories, such as at Batlow, New South Wales, should be encouraged and assisted to increase production. Experience there gained would be most valuable to the new industry.

Sites for Fruit Juice Factories.

If possible, existing buildings belonging to fruit packing or cold storage organisations should be utilised, but, where necessary to erect new buildings, sites selected should preferably include the following advantages—

(a) Hillside position, permitting of gravity arrangements of supply and distribution of fruit and juice.

(b) Good facilities for road, rail or water transport of supplies and manufactured article.

(c) Easy access to adequate water supply.

(d) Source of cheap power for driving machinery.

(e) Room for extensions if found necessary.

(Continued on Page 32.)

Duncan Bros.'
Orchard Disc Cultivator

A Really Satisfactory Tractor Implement
61 High St., Shepparton' Vic. Phone 215.

NEW SOUTH WALES (Continued)

N.S.W. Fruit Industry Enquiry

13,244 Miles Travelled

PROCEEDINGS NOW DRAWING TO A CLOSE.

AFTER HAVING CONDUCTED its inquiries for a year, the Commissioner and the staff of the Fruit Inquiry Commission have completed 13,244 miles, having visited 44 centres throughout the State, also Melbourne and Brisbane, in the course of studying marketing conditions, and hearing 400 witnesses representing every branch of the industry, whose evidence to date amounts to more than 5,500 typed foolscap pages. It is hoped to close the inquiry in the middle of October.

Sufficient Fruit Now Grown.

Evidence given before the Fruit Industry Commission recently by Mr. W. Le Gay Brereton that the stone fruit industry was not in a satisfactory condition. The chief cause, he said, was that more fruit was produced than could be disposed of at reasonable prices under present methods of distribution. He believed that proper control of planting, if it could be assured, would allow the position to correct itself and keep a reasonable balance between supply and demand on the domestic market. Prices paid at present for canning Peaches and Apricots were satisfactory, but nobody could say how long they would be maintained.

Asked if any section of the industry offered opportunities for extension, Mr. Brereton **said he believed that Almond growing could be extended.** Referring to **Cherries**, he said that granted good conditions, an efficient grower should be able to get seven or eight boxes per tree. Inefficient growers were increasing the average cost of production.

Better Marketing Needed.

Reginald James Benton, Fruit Instructor, said that citrus growing was unsatisfactory owing to reduced public purchasing power in some districts, as a result of inefficient growing methods. Marketing would need to be better organised if the industry was to reach a more satisfactory state.

There were no opportunities at present for expansion of the citrus industry. Mandarins must always play a small part in the industry, but the demand for good Navels had had a depressing effect on the market for Mandarins.

Apple Varieties.

Mr. L. J. Jenkins, farm produce agent, suggested that the number of varieties grown should be decreased, by regulation if necessary, and only certain types grown in the various areas which proved most suitable to that variety. He considered that varieties should not be re-named after improvement.

Mr. Heane's Evidence.

Mr. James Heane, orchardist, of Pennant Hills, and President of the Fruitgrowers' Federation of N.S.W., Chairman of the Australian Citrus Advisory Council and the Co-operative Bud Selection Society Ltd., advocated many changes. They included some definite qualifications essential before an agent was permitted to operate on the market; indelible record at the time of sale on official stationery at the time of sale, each sheet being numbered and all sheets requiring to be accounted for; a Fungicides and Insecticides Act fixing standards of production; that Nos. 1 and 3 Markets should be remodernised, taken from the control of the City Council, and placed under a trust created for the purpose; a survey made of all orchards and the elimination and destruction of all uneconomic trees and abandoned orchards; the orchard registration fee, it was stated, provided a ready and equitable means of providing finance to maintain a growers' organisation.

Mr. A. T. Currie, Annan Grove, advocated a board along the lines of the Egg Marketing Board.

Mr. W. A. Mills, fruit inspector for the Hornsby district, said that in some places in the Hills district, Apples were successfully taking the place of citrus fruits where replanting had occurred. Owing to the shallow nature of the soil, citrus trees had a short life. Owing to the many "back yard orchards" there was great difficulty in controlling Fruit Fly, although growers were taking all precautions.

Mr. W. B. Stokes, retired Departmental Fruit Inspector, held that the grower was not to blame for the present condition of the industry, but the trade depression. If people had sufficient money to buy the fruit there would never be a glut season. **Problems facing the industry were mainly economic.**

Mr. F. A. Nicolson, a fruitgrower for 40 years, declared that 50 per cent. of the agents could be dispensed with. Because of lack of co-operation between the States he considered that any scheme for orderly marketing would need to be Federal and compulsory.

Motor Transport.

Mr. R. J. FitzGerald, Secretary of Associated Motor Transport of N.S.W., stated that it was advantageous to growers to transport their fruit by motor carriers instead of rail. Instead of the fruit being handled four times, as was necessary when railed, the fruit was loaded at the orchard and unloaded at Darling Harbour; empty cases were returned free of charge. Despite the fact that there were various movements afoot to reimpose the road tax on all farm products carried by motor carriers, more fruit was being transported by motor lorry now than there was three years ago.

MURRUMBIDGEE IRRIGATION AREAS—(Continued).

land that now, under the ravages of drought has caused many farms to be almost abandoned, will at least be served with a stock and domestic supply, which will enable settlers to remain on their holdings, and not have to drive their few remaining animals or flocks along the banks of irrigation canals in order to keep them alive. The pitiful sight of half-starved stock has been a veritable eyesore during the past season, but it may yet prove the means of bringing home to many outback farmers the necessity of making provision for lean years during those years of plenty which do occur from time to time.

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Despite the low prices which have been ruling during past years for citrus fruits, there are still those who evidently have faith in the industry, and many thousands of citrus trees, mostly Valencias and Lemons have been received at the Area stations during the past fortnight. A close examination is kept on all nursery stock entering these Areas, and every bundle of trees is opened and examined, and if not accompanied by a fumigation notice, signed by an inspector of the Agricultural Department, the fruit trees are promptly fumigated in the local plant.

Some exceptionally fine citrus trees have been received, and there is still a shortage of supply from many nurseries.

WHY RASPBERRIES FAIL.

During Summer, Raspberries require more attention than at any other season. Dryness is detrimental to the production of luscious, well-formed fruits, but this may be avoided by giving copious supplies of water, if needed, and frequent applications of liquid manure, which supply moisture and nourishment.

Mulching also has a beneficial effect in conserving moisture and supplying nutriment. Old stable manure is the best mulch for Raspberries, but hop manure may be used instead. Before putting on either, go over the beds with the Dutch hoe, clear away all weeds and rubbish, and sprinkle some superphosphate round the canes, forking this in lightly a few days later.

The Raspberry is surface rooting and when working in the plantation with a garden tool, be careful not to touch or damage the roots. Another point which requires special attention is the growth of young shoots, which will bear fruits next season. If the shoots sent up are very strong and vigorous, five or six of them may be left at each stool, but if they are inclined to be thin and spindly, fewer should be left.

N.S.W. BANANA BOARD.

Growers Vote in Favor of Dissolution.

On September 24 a poll was taken regarding the future of the Banana Marketing Board in N.S.W. Votes in favor of dissolution were 692, and for continuance there were 667.

The votes polled were given by more than three-fifths of the producers entitled to vote. As the result gives a majority of 25 in favor of dissolution, the prescribed steps will be taken to dissolve the Board.

The Director of Marketing, Mr. A. A. Watson, who conducted the poll as returning officer, stated that the decision of the growers showed about 51 per cent. in favor of dissolution of the Board, and 49 per cent. in favor of its continuance. This was a very close result, agreeing nearly with the vote of three years ago on the question whether the Board should be constituted, when the voting showed 52 per cent. in favor of the Board, and 48 per cent. against.

New Orchard Spray Equipment

A NEW type of spraying outfit of considerable interest to orchardists has lately been produced by Messrs. Duncan Bros., of High-street, Shepparton, Victoria, for Mr. Roy Roberts, of Shepparton East.

This outfit has been designed for attachment to a McCorwick-Deering Caterpillar tractor, and the power from the tractor engine has been utilised to drive the triple plunger high pressure spray pump. This has been effected by connecting the pump drive shaft to the power take-off shaft of the tractor through two universal joints in such a way that the tractor may be turned at right angles to the spray outfit, and still continue to drive the pump at full pressure.

The pump and working parts are completely enclosed to protect them from the spray and dust, whilst easy access is provided for adjustment.

The outfit is manufactured of welded steel, and has a capacity of 300 gallons with gauge corks at the 100 gallon indicators. An efficient refiller is provided which fills the vat in less than 10 minutes. Two 60 feet spray hoses are attached enabling two rows of trees on each side to be spraying. The outfit permits orchardists to cover a big area each day.

Mr. Roberts, who has used the new outfit in spraying his orchards, speaks most highly of its effectiveness and the rapidity in which it enables spraying operations to be completed.

In addition to the excellent agricultural implements which have been manufactured by Messrs. Duncan Bros., of special merit is the production of a specially designed orchard disc cultivator. An outstanding feature of this cultivator is the effective system of gears which cut out the numerous "gadgets" usually associated with cultivators.

The setting and flexibility of the disc gangs allows the tractor to run in the centre of the space between the rows without being in any way detrimental to thorough cultivation.

New type of Spraying Outfit as described above.

We Have Been Asked to Express Our

DURING the past few months there has been a definite development of two new ideas in fruit distribution. They are the "Karrybetta" Tray and the Greenwood Patented Storage Shed. In the following paragraphs we present a few claims made for these packing methods, most of which have already been demonstrated.

The Karrybetta Tray.

As far as the trays are concerned, we are convinced that the patentee's claims are justified. Samples of different fruits in trays have been on display in the company's office for several months before showing any sign of breakdown. The main objectives sought for in the tray have been achieved in that:—

1. The display of the fruit is most artistic and pleasing.

2. Bruising in handling should be entirely eliminated.

3. They should limit the spread of disease or breakdown from one fruit to another.

4. The ventilation provided by the tray should carry the fruit at a reduced temperature and it is reasonable to believe that it should carry better.

5. The purchaser of fruit, either in cases or trays, is able to see the quality of the fruit purchased and will buy with more certainty and satisfaction. That being so, he will more confidently pay a higher price.

6. The patentee has arranged for different-sized fruit by providing various sizes of trays to meet seasonal and variety conditions.

There seems to be no reason to question the report that in experiments already made with shipments to other States and to London, the price returns for tray-packed fruit were interestingly higher than for similar fruit in ordinary shipping cases. It is also conceivable that their better display will also have the effect of lifting the status of Australian fruit both in this form of packing and in bulk. This should also be the experience with Victorian fruit on interstate markets, and district fruits on the Melbourne market.

The total cost of the trays per ca is from 1/- to 1/2, or an average o 1/1 per case. The manufacture state that by using "Karrybetta trays the fruit can remain longer o the tree, be packed in a more ripe con dition, open up in better condition, un bruised, that the cases carrying tray will contain say, 15 per cent. less frui that corrugated cardboard and tissu wrappers are unnecessary, and tha the grower will get improved return even if he only receives the sam price per case, the use of the tray sounds like a good proposition.

Account Sales Shown.

We have seen account sales in whic fruit packed in "Karrybetta" trays re turned **double the market price** fo similar fruit in bulk. One wholesa

Scientific Practical Produc

Greenwood "KARRYBETTA" TRAY

Patented No. 3952-37

Which Brings Untouched by Other Hands from Grower to Customer

Sun Kissed, Tree Ripened, Full Flavoured Selected FRUIT

Grower Guaranteed

Carries **Riper Fruit Better** and brings to the Grower greater **Profits** - more weight in the crop packed - Increased Markets - more fruit sold, and the reduction of losses due to damaged fruit.

To the Consumer, Better Coloured **Full Flavoured, Tree Ripened Fruit** at little added cost.

Something New! ——— **Something Better**

Mr. Grower——Give Your Fruit Reserved Seats

Packing Made Easier **Pack for Greater Profits**

Also Greenwood Patented Storage Shed

Write for Details No. 3299/38

Erected at Low Cost or Sheds can be converted. Fruit Keeps much longer. Disease Retarded. Avoid Gluts. Save Cool Storage Charges. End Trouble. Will Soon Be In General Use.

Extract This Page and Keep

traightforward Opinion and Here It Is

uit merchant in Sydney wrote as lows:—

"I am of opinion that these cartons ll be an advantage and we could ve sold many more had we received em. The air holes ensure the re-ired ventilation and the appearance d design are excellent."

But behind this method of fruit in ays is incorporated a principle of azing possibilities. Fruit throws certain gas properties which, mix-g with air, have a preservative effect. ese "ventilated" trays enable these ses to percolate right through the se and even such fruit as Tomatoes ve been kept in perfect condition r 30 days and more. This justifies, our opinion, growers testing these ays out with a view to permanently using them if and when the test is satisfactory.

The Greenwood Patented Storage Shed.

This gas treatment of fruit is incorporated in the Greenwood Patented Storage Shed. Any well-built shed can be scientifically constructed with insulated boards and cork dust, and, with the aid of specially located electric suction fans, will produce results that, it is claimed, will keep the fruit in a satisfactory condition for a reasonably lengthy period.

These sheds can be erected, by arrangement with the patentee (Mr. Greenwood), on the orchard itself or the **Better Pack Fruit Storage Pty. Ltd., whose registered offices are at** 308 Flinders-lane, Melbourne, will convert or erect any size sheds to meet all requirements. The low cost of converting or erecting this form of storage, we are informed, will surprise growers.

Storage Already Operating.

The company is erecting storage sheds or chambers at 203 Victoria-street, North Melbourne, and it is now considering acting as fruit merchants and agents for growers, doing the whole packing and distribution. They claim that permanent labor will be more economical to growers than seasonal labor and that all fruit will be controlled and packed by experts. This method of storage has already been tested in Melbourne. Results have been more than satisfactory and a full report in detail is now being prepared for the information of growers and the fruit trade in general.

The Experience of Practical Growers.

These new principles of packing fruit have been developed by practical fruitgrowers in co-operation with city merchants long experienced in the marketing of fruit.

We realise that, because of past experiences, growers may be somewhat sceptical or conservative in adopting new ideas, but as actual tests can be carried out by growers at such a small initial outlay, we suggest that they should at least thoroughly investigate these two new methods and be guided by their own actual experience.

The company will be glad to give any further information desired, either by correspondence to the above address or by telephoning Mr. E. K. Greenwood, M 5375.

tions for the Fruitgrower

THE GREENWOOD "KARRYBETTA" PATENT FRUIT TRAY No. 3952-37

Price List.

NO. C.4 TO FIT CANADIAN APPLE CASES
8 trays to the case, depth 2⅜ inches.
Price for 8 trays, 1/- per case.

NO. C.5 TO FIT CANADIAN APPLE CASES
10 trays to the case, depth 2¼ inches.
Price for 10 trays, 1/1 per case.

NO. C.6 TO FIT CANADIAN APPLE CASES
12 trays to the case, depth 1⅞ inches.
Price for 12 trays, 1/1½ per case.

NO. D.4 TO FIT STANDARD DUMPS
8 trays to the case, depth 3 7-16th inches.
Price for 8 trays,1/- per case.

NO. D.5 TO FIT STANDARD DUMPS
10 trays to the case, depth 2⅝ inches.
Price for 10 trays, 1/1 per case.

NO. D.6 TO FIT STANDARD DUMPS
12 trays to the case, depth 2¼ inches.
Price for 12 trays, 1/1½ per case.

NO. D.7 TO FIT STANDARD DUMPS
14 trays to the case, depth 1 15-16th inches.
Price for 14 trays, 1/2 per case.
Other sizes on application.

Procurable from Fruit Agents, Packing Sheds, etc., or write to the Central Distributing Agent:
E. K. GREENWOOD. 308 Flinders Lane, Melbourne, C.1.
Telephone M 5375.

Through our Patent rights, the Greenwood "KarryBetta" trays are the only trays which can be used in the cases now used for marketing, or any variation thereof, and the public are warned against infringement.

When Ordering

(1) From the above List select the Tray you require.
(2) Decide the Quantity of Cases for which you require Trays.
(3) Then Order Thus:—Trays No. . . . . For . . . . . Cases
(State Whether for Canadians or Standard Dumps.)

Remember the Tray should be Slightly Deeper than the Size of the Fruit

Advantages to the Grower

A. Fruit left on the trees until fully ripened increases in size and weight from Ten to Twenty per cent. during the last few days.

B. Fruit packed in the ventilated KARRYBETTA trays ripens slower and carries better. Looks better, and any imperfect fruit that might have been packed in error is isolated.

C. In checking financial returns calculate on the weight of fruit packed. Not per case.

D. A Case packs in KARRYBETTA trays approximately Fifteen per cent. Less fruit.

E. Remember too, you have larger fruit to pack through being left on the trees longer to develop.

F. Extra profit is assured the grower even if a case of KARRYBETTA fruit is sold at the same price as an ordinary packed case. There being, say Fifteen per cent. less fruit in the KARRYBETTA case.

G. The Extra cost per case for export after deducting the saving on tissue paper, corrugated strawboard is less than Sixpence per case.

H. Fruit packed in the KARRYBETTA trays packed good stays good and brings to a penny per pound more. See you get it or ask the reason why.

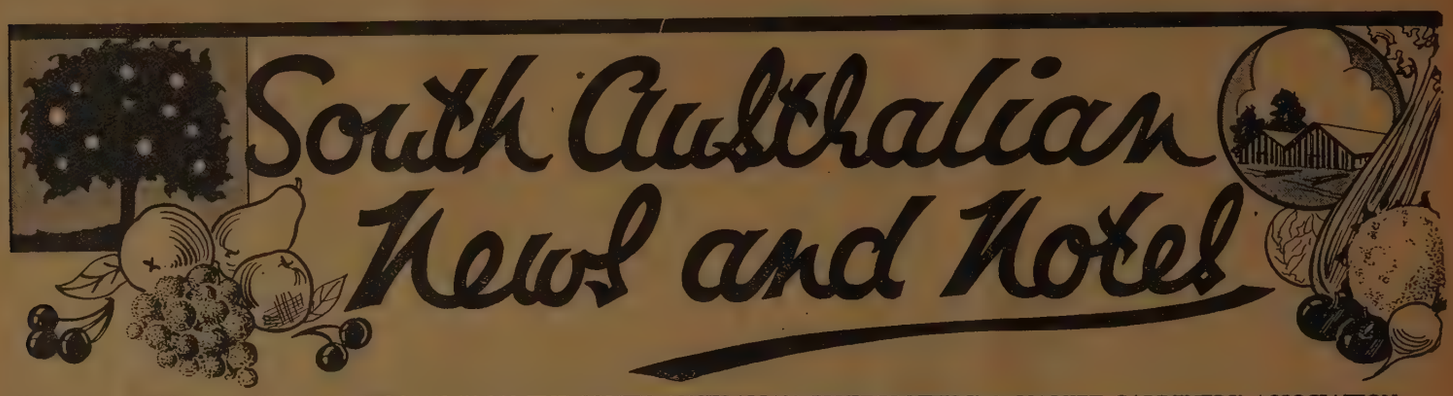
I. Enables fruit to be sold by the Retailer by the single tray as well as by the pound.

J. Cases to contain Trays can be purchased for 1d. per case less.

MEMO

Fruit Packed in these Trays LOOKS at its best, Carries Better and Sells Better at Higher Prices.

or Reference and for Ordering



INCLUDING OFFICIAL NOTES AND REPORTS FROM THE SOUTH AUSTRALIAN FRUITGROWERS' & MARKET GARDENERS' ASSOCIATION.

The South Australian Fruitgrowers' & Market Gardeners' Association Incorp.

Meeting of Executive Committee

THE September meeting of the executive committee was held in the Board Room on September 30, 1938, at 10.30 a.m.

The meeting, which was presided over by the President (Mr. W. J. Bishop) was attended by Messrs. R. Hunter, J. Turner, C. H. Ragless, G. H. Schultz, H. H. Schultz, I. R. Adams, H. W. Parsons, G. Jennings, E. L. Giles, C. Ridley, J. C. Potts, N. T. Hobbs, W. H. Ind, H. B. Robson, C. W. Giles, A. E. Brealey, H. N. Wicks, J. B. Randell, C. J. Pitt, C. D. Giles and Secretary.

Apologies were received from Messrs. F. Hughes, C. Stanford and L. J. Wicks.

Minutes of August meeting taken as read and confirmed.

Correspondence: Letters from S.A. Fruit Marketing Association, Fruit Merchants' Association, Messrs. G. Quinn, Hon. T. Playford, R. Fowler, and A. G. Strickland, accepting invitation to Conference dinner.

Dr. A. R. Callaghan, Principal Roseworthy College, advising subject of his Conference address; A. G. Strickland, accepting invitation to open annual meeting; Hon. A. P. Blesing, advising of his inability to be present at both the Conference and dinner.

Department of Agriculture, submitting quantities of fruit held in cold storage as at 1/9/38.

Export Sugar Committee re export sugar rebates as from September 1.

Hon. T. Playford relative to the use of manure bags for the carriage of fruit, etc., and copies of letters received by him from the Metropolitan County Board.

Elgin Gas Corp. Ltd., re Elgin Gas System. (Letter handed to Soft Fruits Section.)

Grace Burn Valley Orchard Co. enclosing copy of letter forwarded to Apple and Pear Council relating to advertising plan for increasing the consumption of Apples. (Referred to Apple and Pear Sections.)

G. Marks, Secretary Loveday Annual Licensed Blockers.

"That the correspondence be received and dealt with," was carried on the motion of Messrs. C. W. Giles and G. H. Schultz.

G.A. Marks: The Secretary reported on the meeting held by the Sub-Committee appointed to deal with the request of the Loveday Annual Licensed Blockers.

Use of Manure Bags: After discussion in this matter, Mr. R. Hunter moved "That the matter be deferred until a later meeting," Seconded Mr G. H. Schultz. Carried.

Accounts for Payment: The Secretary presented accounts for payment, and it was resolved that same be paid.

The meeting then adjourned into the annual general meeting.

Annual General Committee

THE annual general meeting was held in the Board Room on September 30, at 11 a.m.

Present: Messrs. W. J. Bishop, A. G. Strickland, R. Hunter, J. Turner, C. H. Ragless, J. B. Randell, H. N. Wicks, A. E. Brealey, G. H. Schultz, I. R. Adams, H. W. Parsons, G. Jennings, E. L. Giles, H. H. Schultz, C. Ridley, C. W. Giles, H. B. Robson, W. H. Ind, N. T. Hobbs, J. G. Potts, C. Walker, C. J. Pitt, G. Clifton, R. Fowler, R. Hannaford, W. Wye, and Secretary.

Apologies received from Messrs. C. Stanford, L. J. Wicks and F. Hughes.

The President welcomed Mr. A. G. Strickland, Chief Horticulturist, who had kindly consented to open the meeting.

Mr. Strickland thanked the President for his welcome. He was appreciative of an earlier invitation to attend meetings of the executive which had not only given him an opportunity of assisting in his official capacity, but had given him a chance to gain information very helpful. The Association was one of the soundest of its kind in Australia, and its 38 years existence is unique. Its organisation of marketing is very sound, and he wished the Association every success in its future endeavors.

The happy co-operation that exists between the Association and the Department was greatly appreciated, and had played a big part in the successful past. He then declared the meeting open for the transaction of the business.

Minutes of the previous annual meeting read and confirmed.

President's Report: The President presented his report, the 35th of the Association.

In reviewing our activities of the past year I have to report a season of sustained effort in keeping the Association machinery in perfect working order.

Constituted as we are, I prefer to think of our Association as something that can be used by all sections of the industry for their mutual advancement rather than a dictatorial body imposing its will on those sections. There have been no spectacular achievements to report, which merely goes to prove that the rights of our members are adequately safeguarded.

The Tomato Section had rather an unfortunate year. Disease, unfavorable weather conditions and a not too abundant crop, proved a combination of circumstances that no amount of organisation could obviate. In spite of everything, however, there was no weakening of this section in its loyalty to the parent body. We sincerely hope that the present season will more than make up for the losses in the past. On the other hand, the Celery Section is concluding its record year, and we congratulate those growers on their good fortune and the manner in which they took advantage of it.

The organisation for the handling of the **Cherry crop** was most efficient, and but for the incidence of rain at a critical period a very satisfactory year was experienced. **The Soft Fruit Section** showed greater activity this year. It was mainly instrumental in arranging a conference with the Wholesale Merchants' Association with regard to the sale of containers with fruit. While this matter may never be quite satisfactorily settled, we still maintain our policy of "Cases Extra."

This Section also instituted an investigation into **Cold Storage problems**, and as a result of a combined meeting we are hopeful that the Government will make available experimental chambers for further research in this important matter. Should this eventuate the Association has guaranteed to supply the fruit.

A price ticket for Tomatoes and soft fruits in season, is delivered to growers on market mornings, and the Association is bearing the cost of its distribution. We hope that the prices will be rigidly observed. This service is also given to Apple growers when a change in price is warranted. It is felt that more could be done for the Apple and Pear Section. The Association is sponsoring an Apple export scheme, and in view of the success attained by our other sections, we are confident that Apple and Pear growers could successfully manage this most important phase of their business. Considering the unsatisfactory season just experienced, I would advise that section to thoroughly organise with a view to working out its own salvation.

I am confident that we have the machinery, and that the industry possesses the necessary business acumen to tide them over a very difficult period. A Road Transport Commission has been sitting, and Mr. Playford, M.P., submitted some very valuable evidence on our behalf. Exception was taken to the inaccuracy at times of the newspaper market reports. A report from each market was published twice a week. A committee interviewed the editor of the "Advertiser," and the outcome of the meeting was a very much improved report, guaranteed by the Association, and covering both markets, published three days a week. We very much appreciate the courtesy shown us by the editor of the "Advertiser."

A very pleasing feature that I wish to mention is that Mr. A. G. Strickland, Chief Horticulturist, accepted an invitation to attend our executive meetings. We very much appreciate Mr. Strickland's interest and valuable advice.

It is with great regret that I mention the loss by death of two very highly esteemed members of our executive. I refer to the late Messrs. L. J. Cowell and G. H. Parsons. Both were stalwarts of the industry and their passing came all too soon.

In conclusion, I would like to thank the staff, the members of the executive, the delegates from branches and sections, and the numerous committees who have given their time and services in making the season under review a most satisfying one.

In spite of our various successes, we must not slacken, but rather strive even harder for our goal, which should be an Association 100 per cent. strong.

Secretary's Report and Financial Statement: The Secretary reviewed the year's activities from a financial viewpoint, and presented the financial statement which showed a satisfactory year's operations.

The President (Mr. W. J. Bishop) moved the adoption of the report and financial statement which was seconded by Mr. H. N. Wicks and carried.

Election of Officers: The following were re-elected for the 1937-1938 year:—President, Mr. W. J. Bishop; Vice-President, Mr. H. N. Wicks. Executive Committee: Messrs. G. Jennings, L. J. Wicks, W. H. Ind, R. Hunter, J. B. Randell, C. W. Giles, J. Turner, F. Staniford, A. O. Petersen, N. T. Hobbs.

Life Member: Mr. E. Giles moved: "That Mr. G. Jennings be made a life member of the executive in recognition of years of faithful service." Seconded Mr. G. H. Schultz. Carried.

Mr. Jennings thanked the meeting for the honor bestowed, and would do his best at all times to further the interests of the Association.

Future Election of Officers: Mr. W. Ind moved: "That prior to future annual meetings the Secretary forward nomination forms to each member of the executive, and draw attention to Rule 19 appertaining to election of officers." Seconded Mr. N. T. Hobbs. Carried.

Sectional Reports.

Reports on seasonal activities were received from the Tomato, Celery, Apple and Pear, Cherry, Soft Fruit, Potato, Citrus Sections, and the Marion Branch of the Association. A report from the Manager of the Society was also presented.

Mr. W. H. Ind moved a vote of thanks to Mr. A. G. Strickland for

INSURANCE

.. The ..

F. & M.G. Society Ltd.

Recommend that Growers avail themselves of Insurance benefits with

GENERAL

ACCIDENT FIRE AND LIFE ASSURANCE CORPORATION LTD.

Assets Exceed £19,000,000
Claims Paid 85,000,000
Definitely Concessions offered to Shareholders.

A. STUART, Secretary.
F. & M.G. Society Ltd.

The South Australian Fruitgrowers' & Market Gardeners' Association Incorp.

ANNUAL CONFERENCE

Held in the Board Room, 288a Rundle Street, Adelaide, on September 30, 1938.

THE President (Mr. W. J. Bishop) who occupied the chair introduced the Commissioner of Crown Lands (Hon. T. Playford) whom, he said, they had asked to declare the Conference open. He mentioned that, in the first instance they had asked the Minister of Agriculture (Hon. A. P. Blesing) to open the proceedings, as he had done in the case of their conferences, in recent years. As he was at present absent from Adelaide, their choice had fallen upon Mr. Playford, whom they knew well, and congratulated upon his elevation to the Ministry.

The Hon. T. Playford said it gave him great pleasure to open the Conference. As one who knew the problems of the fruitgrowing industry he had always been interested in matters affecting the welfare of the land. In South Australia the settlement of population must be confined to the heavier rainfall areas. If the State was to carry a big population it would have to be within that region. Much of the Crown lands, not occupied, outside the rainfall areas, would probably still be unoccupied in one hundred years' time. The influx of population must depend very largely upon increased production within the rainfall zone, and the development of secondary industries.

During the past few years the Government had made successful attempts to establish industries in the State. The progress of such industries did much to develop local markets. Then there were the overseas markets, the scope of which he thought, were not yet fully realised. Only that morning he had received a letter from the South Australian Trade Commissioner in London (Sir Charles McCann), in which he referred to the great possibilities of finding good European markets for Australian Apples. Sir Charles mentioned that he had met with much price-cutting and unnecessary competition from sources which were not acting in the interests of Australian growers.

The matter of the prices in the various States had done damage. For instance, the extremely low prices accepted by Tasmania last year had done harm. In some cases there had been persistent undercutting of prices, in which practice South Australia had been one of the offenders. Referring to the European markets available to Australian fruitgrowers, Sir Charles stated that France offered increasing prospects for Apple producers. From what Sir Charles McCann wrote, and from what he himself knew from other sources, he considered that there was ample evidence that, provided they packed their fruit rightly, and marketed it properly, there was still considerable scope for overseas trade.

They must insist upon an orderly mode of marketing, and standard packs, for overseas buyers with whom they did not come into contact. If they made a rule of following such a practice he thought they could look forward with confidence to the future. The conditions in the fruit growing industry were not quite so good as those prevailing in some other industries. Perhaps that was a good thing, for it made for self-reliance, and the overcoming of obstacles. In conclusion, he apologised for the absence of the Minister for Agriculture. He was pleased that their Federal representative (Mr. C. A. S. Hawker) had been able to attend that day. Mr. Playford then declared the Conference proceedings open.

Visiting Legislators Thanked.

Mr. J. B. Randell moved a vote of thanks to Mr. Playford for having opened the Conference. He coupled the name of Mr. Hawker with the motion. They were pleased to have men like Mr. Playford and Mr. Hawker in such close touch with their industry.

Mr. J. Vickers, seconding the motion, said he endorsed the remarks of the mover.

The motion was carried with acclamation.

The chairman asked Mr. Playford to accept a basket of fruit as a token of their appreciation of his attendance.

At the request of the chairman, Mr. C. A. S. Hawker, M.H.R., responded to the motion. Referring to the problem of marketing produce, he said trade treaties had a definite bearing upon the prevailing tension in various directions. There were restrictions, within the British Empire upon trade with Continental countries,

Trade preferences were dividing the world into groups, and many people were anxious to do everything possible to relieve the existing tension. The people who grew their products properly should receive the benefit of good markets.

Address by Dr. A. R. Callaghan.

Dr. A. R. Callaghan (Principal of Roseworthy Agricultural College) then delivered an address upon his recent visit to South Africa as leader of a party of agriculturists. He said South Africa was often stated to be very similar, in its conditions, to Australia. Actually, however, it was very different in many directions. In the first instance, over 85 per cent. of the area of South Africa they had Summer rainfall, and Winter drought—the opposite of the case in the greater part of Australia. That meant that they grew different crops, and that their outlook was different. In South Africa there was a high evaporation rate, and a great amount of moisture was lost in Summer. The Summer rain fell with great intensity in South Africa, and added to settlers' problems. There was greater soil erosion there than in Australia. The irregularity of the rainfall there was greater than in the case of Australia.

Another vital factor was the fact that South Africa was largely a huge plateau. There was a comparatively narrow fringe of country round the coast, before the land rose to the plateau, attaining a height of about 6,000 feet in the Transvaal. In most parts of South Africa the weather was often hot during the day, and very cool at night. In that respect South Africa differed greatly from the southern part of Australia. Australians were essentially primary producers, but South Africa was mainly dependent upon one thing—gold. More than £80,000,000 of gold per annum came from the Johannesburg mines. In most spheres the interest of South Africans centred round gold production. South Africans were definitely not so agriculturally-minded as were Australians.

In view of the country's big gold production there appeared to be so much money about that the Government hardly knew what to do with its surpluses. Considerable sums from those surpluses were allotted to the man on the land, particularly for irrigation works. Between 1934 and 1938 the amount of £15,000,000 had been spent in bonuses and bounties to help South African farmers. Personally, he thought that such a system was wrong, for it undermined the self-reliance and moral principles of the farmers. It seemed that if a South African farmer had any special work in progress, he could claim from the Government up to about 75 per cent. of what he spent upon it. Nearly every branch of agriculture in the country appeared to be highly subsidised. National income thus played a big part in the development of South Africa.

The matter of native labor was another factor which made South Africa contrast vividly with Australia. The population of South Africa totalled roughly 10,000,000, including 8,000,000 natives. Of the 2,000,000 whites, about 350,000 known as "poor whites," could not obtain employment because the natives did all the hard labor in the country. The effective white population of South Africa was therefore under 1¾ millions. The Government vote for agriculture last year had totalled £1,436,000. The average wage for a native laborer was a about 10/- a month, and keep. In the gold mines, where the work was hard all the time, the natives were paid 3/- a day. A white worker there got from 15/- to £1 a day. South Africa could work gold areas no richer than about 3¾ dwt. to the ton, whereas in Australia such areas could not be worked under an average of about 9 dwt. to the ton.

In South Africa agriculturists were "white collar farmers," and usually were not particularly interested in farm work. Through various causes the country had not progressed satisfactorily in agriculture. To begin with, nearly all the haulage was done by mules, donkeys, or oxen. All the shearing of sheep was done by natives, who averaged about 30 sheep a day, and received 10/- per hundred sheep shorn. An Australian shearer would average about 100 sheep a day. The whites appeared to lean on the natives for everything in South Africa. That was why so little progress, comparatively, had been made in agriculture there.

In the horticultural sphere, the citrus industry was highly organised, and the wine industry had made some headway. That was because there were export markets for those products. The dried fruits industry was in its infancy. South Africa produced no meat worthy of export overseas. Every animal in the country appeared to be regularly dipped. There was a very limited demand for good beef in the country, but a big demand for poor beef. Just as high a price was got for poor beef as for good beef! The lamb, mutton, and beef raised was of poor quality. The Government

(Continued from page 22.)

his interest in the Association. Mr. G. H. Sschultz seconded. Carried with acclamation.

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Mr. N. T. Hobbs moved: "That a minute of appreciation be recorded for the services rendered during the year by the President." Seconded Mr. C. Ragless and carried.

SUBSCRIPTIONS.

Subscriptions for the year commencing September 1 are now due, and members will assist greatly by paying same at the earliest opportunity.

The October executive meeting will be held in the Board Room at 10.30 a.m. on Friday, October 28, 1938.

W. J. BISHOP, President.
A. STUART, Chairman.

MARION BRANCH.

The next meeting of the branch will be held in the usual place on Wednesday, November 2, 1938.

All members are requested to attend.

R. DUNCAN, Chairman.
A. C. GIBSON, Secretary.

FRUIT TREES

ALMONDS. APPLES. PEACHES, APRICOTS, PLUMS, QUINCES, etc., in best sorts.
Extra strong trees 1/6 each, 15/- doz. Usual size 1/- each, 10/- doz., 75/- per 100.
CHERRIES on Mazzard 1/6 each, 15/- doz., £5 100.
GRAPE VINES, 6/- doz., 35/- 100.
GOOSEBERRIES, LOGANBERRIES, CURRANTS 4/- doz., 25/- 100.
STRAWBERRIES 2/6 100, 14/- 1,000.
RASPBERRIES 1/- doz., 6/- 100.
ROSES.
Choice: 1/- each, 10/- dozen.
Standards 2/3 each, 25/- doz.
Maples, Genistas, Cotoneasters, Ash, Oaks, Elms, Poplars and big variety of shrubs and trees, 1/- to 4/- each, according to size and kind.
A. G. NIGHTINGALE & CO., Nurserymen, Emerald, Victoria.

Colloidal Sulphur

Established by field trial and scientific tests as the major recent advance in the control of Fungous Diseases of Vines, Orchard Trees and Vegetables

HOWARD'S COLLOIDAL SULPHUR

is better and cheaper than competitive brands. Pamphlets, prices and details of free test offer from the manufacturers:—

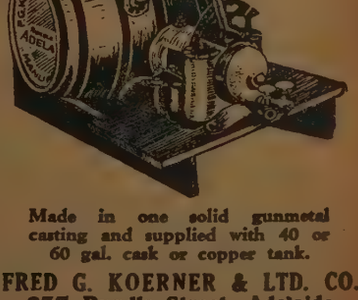
R. G. Howard & Co., 27 GRENFELL ST. ADELAIDE

Troubles Forgotten

when you purchase an

"Everlasting" Sprayer

No more corrosion or washer troubles. Always an even high pressure.



Made in one solid gunmetal casting and supplied with 40 or 60 gal. cask or copper tank.

FRED G. KOERNER & LTD. CO. 275 Rundle Street, Adelaide

was trying hard to improve the quality of the meat produced, to make it good enough for export, but much remained to be done.

A predominant factor throughout South Africa was the political interest. Everybody was interested in politics, and persons thought nothing of travelling long distances to political meetings, where they would not "go round the corner" to attend an agricultural meeting. The South African national outlook was very different from that of Australia. Australians were a united people who regarded themselves as part and parcel of the British Empire, but South Africans were divided into political groups with widely different outlooks. Australians knew little about South Africans, just as South Africans knew little about Australians. He thought goodwill tours such as that which his party had made recently would do much good to bring about a better understanding between the Dominion and the Commonwealth. Personally, he thought our Imperialistic policy was not right. South Africa was spending £10,000,000 upon harbor improvements, mainly at Capetown, yet in time of peace, nearly all Australia's trade went to Europe by another route. In time of war, Australian shipping would probably "rush" Capetown. There was no other country so strategically valuable to Australia as South Africa.

After Dr. Callaghan had replied to questions, Mr. J. Turner moved a vote of thanks to him.

The motion was seconded by Mr. N. T. Hobbs, and carried with acclamation.

Mutual Hospital Fund Scheme.

Mr. D. G. Smith, at the invitation of the chairman, explained the contributions scheme of the Mutual Hospital Association Ltd., which he said, had received wholehearted support throughout the State, including the co-operation of fifteen bodies affiliated with the Murray Wholesale Association. The scheme was not a profit making one, and the cost of its administration was, approximately 10 per cent. of the annual income.

At the conclusion of Mr. Smith's remarks, the chairman said the subject of the fund would be considered by the committee of management of the Society at a later stage. The scheme was worthy of recommendation.

University Chair of Distribution Urged.

Mr. R. Hunter introduced the subject: "That the Government be asked to create a Chair of Distribution at the University of Adelaide." He said the question might appear a big one for a Society such as theirs to take up, but it merited their careful consideration. To-day's production was overtaking consumption, and a serious problem had arisen. Nothing being attempted by Governments appeared to be assisting distribution; on the contrary, distribution was rather being hindered. The sugar and butter industries provided examples of the need for something to be done to solve the distribution problem. In those industries the Government was assisting people overseas to obtain Australian sugar and butter at a cheaper cost than Australians themselves could buy those commodities. Production was not being distributed as it could be. The appointment of royal commissions to consider such a problem was not satisfactory, for the reports of such bodies were usually shelved by governments, and forgotten. The question of distribution required the constant study of an expert mind, such as he proposed.

In a discussion which followed, it was suggested that a committee of practical business men might be better able to grapple with the problem of distribution than the occupant of a University chair. Another point raised was that distribution was largely dependent upon the purchasing power of the mass of the people on the basic wage, or thereabouts. One speaker referred to the cost of getting produce to the consumer as an important factor influencing distribution.

Replying, Mr. Hunter said business men had not the time to put the necessary thought into the distribution problem. A man trained in science, at a University, might investigate the problem in a way that would bring about a solution.

On the motion of Mr. Hunter, seconded by Mr. H. B. Robson, it was decided to defer further consideration of the subject until a later date.

Annual Conference Date Discussed.

Mr. V. W. C. Schulze brought forward for discussion the following two questions: "What part of the year is most suitable for the holding of the annual Conference?" and "Should the executive Committee meet at night?" The holding of the Conference in September, as at present, he said, meant that it took place at the busiest time of the year for fruitgrowers. If they altered the time now adopted they might arouse greater interest in the Conferences. With regard to the executive Committee meetings, those at present took place on a Friday morning—the busiest time of the week. Would it be better if the executive Committee met at night? The industry needed the services of the best men available to guide its activities, and the meetings should be arranged to meet the convenience of busy men. Possibly the matter might be left to the members of the executive Committee to fix a time that best suited them as a whole.

The chairman said the Conference question was one that had always caused the executive concern. They could never choose a time to suit everybody. It was provided in their rules that the annual meeting should be held in September, and any alteration in that matter must be authorised by a general meeting.

Mr. G. J. Strange moved that a questionnaire should be sent to each member of the executive Committee inviting his opinion regarding the best month for the annual Conference, and the most suitable time to hold the executive Committee meetings.

Mr. G. Jennings seconded the motion, which was carried.

An Expression of Sympathy.

It was decided, on the motion of Mr. G. H. Schultz, seconded by Mr. H. B. Robson, to send a message of sympathy to Mr. F. Hughes (chairman of the Soft Fruit Section of the Association), who was unable to be present through an accident, in which he suffered a broken arm.

Advisory Field Officer Suggested.

Mr. V. W. C. Schultz asked that the Department of Agriculture should be requested to appoint a field officer to co-operate with the various sections of the horticultural industry, and advise upon problems which arose.

The chairman said he doubted whether the Department would appoint a special officer. He thought horticulturists could obtain all the assistance they required by applying to the Government Department for it.

No action was taken in the matter.

Quarterly Educational Meetings.

The chairman mentioned that the quarterly educational meetings had been discontinued because of poor attendances. It was hoped, however, to revive them at an early date.

The Conference Concluded.

After thanking the members present for their attendance, the chairman then declared the conference closed.

Conference Dinner

THE usual Conference luncheon – held in former years at midday – was dispensed with this year and replaced by a dinner at the "Arcadia" Cafe, King William-street, at 7 p.m.

A satisfactory attendance resulted, and a most enjoyable evening was spent by all.

The toast of "Parliament" was proposed by Mr. H. N. Wicks, member of the Advisory Board of Agriculture and responded to by Hon. T. Playford, Commissioner of Crown Lands.

In proposing the toast "The Industry and the S.A. Fruitgrowers' and Market Gardeners' Assn. Incorp.," the Chief Horticulturist (Mr. A. G. Strickland) referred to the importance of the industry from a national viewpoint. In 1937-38 the export of South Australian fruit was worth £2,000,000 to the State, but this was exclusive of fruit, etc., sold to the Eastern States, which amounted to a considerably large amount. There was no doubt concerning the quality of locally-grown fruit and vegetables. Celery, Cherries, and Tomatoes were equal to the world's best. The chairman (Mr. W. J. Bishop) responded.

Mr. C. A. S. Hawker, M.H.R., and Mr. George Quinn, former Chief Horticultural Instructor, responded to the toast "Our Guests," proposed by Mr. G. Strange (chairman of the Celery Section).

The evening was concluded by a programme of talking pictures arranged by Mr. H. N. Wicks (Vice-President) which were of educational value.

The chairman expressed the appreciation of those present for the fine effort of Mr. Wicks which had brought to a fitting close a most successful day.

ORCHARD PESTS.

At a meeting of the Agriculture Bureau of S.A., held September 13, Mr. A. G. Strickland (Chief Horticulturist) said:

Red scale of citrus was the most serious pest growers had to contend with, but fortunately measures to prevent it from extending to the Murray Valley, where more than half our citrus fruits were grown, had been reasonably successful. Red scale was the most destructive insect affecting citrus trees in this State, and the most difficult and expensive to control. This could be done by spraying with oil preparations, by fumigation with hydrocyanic acid, or, most effectively by a combination of the two. Whatever the control programme, the trees should be properly prepared, weeds destroyed before treatment and the trees skirted so that the lower limbs were free from the soil surface.

Mr. Adam said that gummosis disease in Apricots was prevalent in some parts of the State, and that it was practically confined to South Australia. However, gumming on Apricot trees could arise from a wide variety of causes and the presence of gum was not certain evidence of the presence of gummosis.

The disease was caused by a fungus which penetrated the wood mainly through pruning wounds. A close watch for infections should be maintained, and when observed they should be immediately removed. In an orchard where gummosis occurred the disinfection of the pruning saw after each usage was advisable.

Fruit Tree Stocks.

Mr. H. N. Wicks said he considered the question of stocks to be important. Little research had been carried out into the relationship between stocks and scions. Northern Spy had

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Royal Show, Adelaide, 1938

Fruit Display in Larger Hall

Better Standard Almost throughout Section

Ideal Packing of Export Apples. High Quality of Vegetables.

THE 1938 Royal Show concluded its record breaking show on September 15, after a week of glorious weather.

Fruit made a better showing this year than in previous years because almost double the space was provided for exhibits in a larger hall. Although competition had weakened in some classes, an improved standard in quality was apparent almost throughout the section, according to the judges.

Citrus varieties were judged by Mr. L. J. Wicks. Navels were up to the usual high standard of the show, he said, and an improvement in competition was noted in some classes. Adverse seasonal conditions had apparently affected some of the entries.

The classes for Apples packed for export comprised the outstanding feature of the section. These were judged by Messrs. L. M. Brown, E. Leishmann, and N. R. Quinn, who awarded the Gerrard Export Trophy to H. D. Morgan (92 points), who was followed by H. T. B. Nicolle (90) and A. Richards (89½). Although competition could have been better, the judges said, the wrapping and packing of the Apples were the best they had seen. Stone Pippins were used by the winner and the other two competitors packed Jonathans. Rome Beauty was, however, the most popular variety in this class. Only best quality fruit had been used, and if the general standard of fruit shipped to England were equal to that shown, top prices would be easily obtained.

Generally, all fruit was packed and wrapped well. This applied particularly to Navel Oranges.

First and second packed Orange awards went to Wood Son, Seary, Ltd., who exhibited Riverland Oranges, and almost as good an entry was received from E. V. Harvey, of Salisbury. Poor competition obtained in packed Lemon classes, and, according to the judges, the quality was not up to expectation.

Apples Improve.

Apples were judged by Mr. C. W. Giles, who said that there was a general improvement on last year's display. Most of the entries were staged in perfect condition, and varieties were true to name and type. The only regret was a lack of competition in some classes.

Most popular varieties were Jonathans, Rome Beauties, Cleopatras, and Dunn Seedlings. Rome Beauties showed up exceptionally well, but the season was a trifle early for best Stone Pippins and Granny Smiths, which were, however, in first-class condition. Few varieties of Pears were shown, but splendid quality obtained.

Pyramids were judged by Messrs. C. W. Giles, L. G. Wicks and L. M. Brown, who awarded the Wicks Challenge Trophy to the Cudlee Creek Co-operative Society, who by its third successive win will permanently hold the trophy. This exhibit, containing 25 varieties of Apples, was considered by the judges to be one of the best that has been shown for several years. All fruit was of the best quality. Competing for the first time, the Balhannah Agricultural Bureau was awarded second prize with 21 varieties. Smaller fruit, which was more an export grade was used in this case, and consequently the showing was not so brilliant as that of the winner. The quality of the fruit was undoubted, however.

The Hobbs Challenge Trophy for the best citrus pyramid will be permanently retained by the Torrens Valley Citrus Growers' Association, who recorded its third successive win. The judges said that there was not an inferior specimen in the group, which was beautifully balanced, and made the finest display they had seen. Second prize was awarded to the Salisbury Citrus Growers' Association. The quality of this was equal to that of the winning entry, the judges said, but the collection was not so striking nor so well balanced.

It was announced that upon revision of Wednesday's prize list the winner of the Orient Line Jubilee Trophy for export Apples was H. C. Austin, who also took third prize with Turner and Sons in second place.

Trophies presented by the S.A. Fruitgrowers' and Market Gardeners' Association for the Senior and Junior Apple Packing Competitions were won by Mr. C. F. Williams, c/o Mr. H. C. Austin, Newmarket (Senior), and J. Coombes, Railway-avenue, Blackwood (Junior).

High quality was noticeable throughout the vegetable section, with Cabbages and Cauliflowers predominating. It was apparent that adverse seasonal conditions had had little effect on the exhibits staged, said the judge, Mr. E. J. Collins.

Trombones, Onions, and Potatoes provided good competition, and were among the best exhibited at an Adelaide Show.

Mr. Collins said that a point which must be considered in conducting a vegetable competition at this time of the year was that September was seeding month for most varieties, and consequently competition was bound to be weak. Vegetables were at their best from February to April.

Halliday Bros., of Stirling, showed the best collection. It was considered by the judge to be a magnificent display, and it included from 30 to 40 varieties of high quality produce. F. Richardson's second prize entry was not as well finished, although only slightly inferior from a quality standpoint. The first named competitor was one of the most successful in this section, with J. Johnson, of Mount Barker outstanding in the Potato Section.

Almonds provided almost the only competition in the nut section, which was judged by Mr. J. H. A. Phillips.

(Continued from Page 24)

been universally used as a stock for Apples because it was resistant to wolly aphis, but in overcoming this disease might they not have suffered other disabilities?

Apricots were budded on seedlings, the seed for which came from canneries, and as the Moorpark variety was the principal one for canning, most trees were on this stock. However, he had read that the man who introduced Moorpark Apricots in England 100 years ago had described symptoms of dieback, very similar to gummosis.

A proclamation has been issued under the Queensland Diseases in Plants Act, declaring the loquat fruit to be a pest, in the fruit district of Warwick, during the period from September 1 to December 31 in each year. Orchardists in the Warwick district must, therefore, remove all Loquats from their trees on or before September 1 every year.

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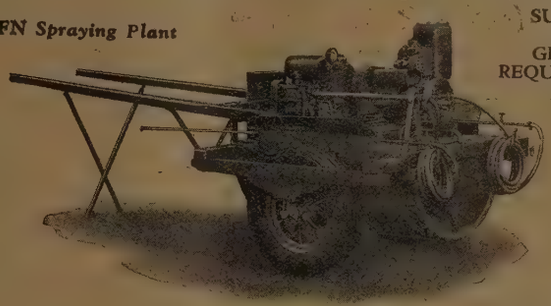

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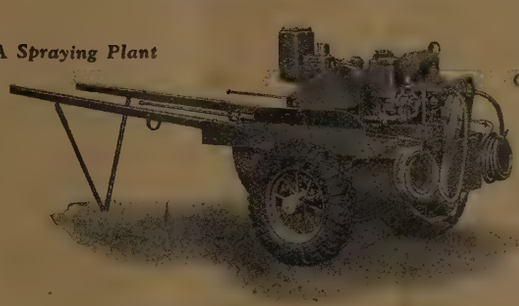

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RONALDSON - TIPPETT

South Australian Fruit Marketing Association

The monthly meeting of the members of the Executive of the South Australian Fruit Marketing Association Inc. was held at Adelaide on September 23.

There were present: Messrs. H. N. Wicks, F. F. Redden, M. G. Basey, R. O. Knappstein, A. G. Strickland, A. O. Petersen, J. B. Randell, R. G. Hannaford, M. Vickers, P. R. B. Searcy, H. J. Bishop, S. M. James, A. R. Willsmore, D. Norsworthy, F. Rowley, G. Quinn, and the Secretary.

The Acting President, Mr. J. B. Randell, occupied the chair.

Grading Regulations.

The question of suggested alteration under the Fruit and Vegetable Grading Regulations re fruit marketed outside a radius of 40 miles of the property on which it was produced was deferred until later.

Correspondence.

A letter was received from the Minister of Agriculture advising that the Department of Commerce, Canberra, were asking for information in regard to the percentage of f.o.b. and/or f.o.r. sales of Apples and Pears compared with the total exports and the average price realised for f.o.b. sales of Apples and Pears respectively, and also if available the average price for f.o.b. sales of Apples and Pears under different varieties.

Copy of reply dated September 2 was approved with the exception of the price of Apples, 3/3 per bushel.

After very lengthy consideration it was agreed to advise the Department that after review it was considered that the orchard price, 3/3 per bushel, was too high, and should be 3/- per bushel.

Correspondence from the Apple and Pear Council dealt with the "Legana" Apple variety, Apple publicity, the Port of Liverpool, and agenda for the Sydney conference.

Crop Forecast.

On the estimates submitted by various delegates it was considered that the crop available for quota export for the coming season would be 350,000 to 400,000 cases.

Annual General Meeting.

It was agreed that the annual general meeting be held on October 28, at the board room of the Adelaide Fruit and Produce Exchange, Adelaide, commencing at 2.30 p.m.

Research Sub-Committee.

Mr. Wicks reported that at the Research Sub-Committee meeting, members had discussed the prospects of the coming season and delegates reported that the season was definitely early in Clare, Balhannah, and Gumeracha districts, appearing to be normal at Cherry Gardens, Cudlee Creek and Upper Sturt.

A discussion had taken place in regard to oil sprays dealing with the best time for application and the effect of various types of sprays, and a number of questions had been answered by Mr. Strickland, Chief Horticulturist.

It was agreed to send a letter of sympathy to Mr. A. Filsell in his recent bereavement in the loss of his wife.

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SOUTH AUSTRALIAN DRIED FRUITS BOARD.

At its meeting held on September 12, 1938, the S. Aust. Board dealt with another long agenda. All members and Secretary were present.

The late Inspector Birt: Secretary reported the death, which took place on September 3, 1938, after a short illness, of Mr. R. G. Birt, who had been the Board's Chief Investigation Officer for nearly ten years. A letter conveying the sympathy of the members of the Board had been sent to Mrs. Birt by the Chairman. The report was noted with regret.

In regard to the appointment of a successor, the matter was left with the Chairman and Secretary to prepare a report with recommendations for the next meeting of the Board.

The position of the Amending Bill to the Dried Fruits Act was noted.

Secretary reported that after conferring with the Chairman, arrangements had been made with the Department of Lands for a special investigation in the irrigated areas. This was being conducted by the Board's Officers in conjunction with Officers of the Police Department at the request of the Government. Noted.

In the matter of uniform cartnote, which was the subject of a discussion at the Interstate Conference in Sydney in May, 1938, replies by packing houses to the Board's circular were submitted and Secretary was directed to prepare a memorandum on the position for consideration at the next meeting of the Board.

An application by the N.S.W. Board for a further grant towards the cost of investigation work in N.S.W. was referred to the Consultative Committee, and a request for a small grant towards frost prevention to a local committee was approved.

Advice was received that the Coonawarra growers had agreed to form themselves into a co-operative body and a request for one of their representatives to confer with the Board was agreed to.

Secretary was directed to prepare reports on Prune production for seasons 1936 and 1937 and of processing methods, and also on the moist packing of dried tree fruits.

Secretary reported that the Dried Fruits Equalisation Committee held its final meeting on September 6, 1938, when all adjustment a/cs. with cheques for payments to the signatories to the Voluntary Trade Agreement 1937 had been sent out.

The remainder of the session was devoted to a large volume of financial, statistical and routine business.

TASMANIA.

T.O.P. Limited, New Director Appointed.

At a directors' meeting held at the end of September, Mr. John Rabbitt, orchardist, of Cygnet, was appointed a director, vice Mr. W. C. Gowans, recently deceased. Mr. Rabbitt is well and favorably known throughout the Huon, and his appointment will doubtless strengthen the growing influence of this company among southern orchardists.

For the last twelve months the Sanitary Food Processing Company, of Seattle, Wash., has been successfully peeling Potatoes by gas flame. The output is now up to 2,000 lbs. of ready to cook Potatoes per hour. The Spuds emerge from under a gas-heated arch and automatically pass to a washing conveyor where all flakes of scorched skin are removed. There then only remains the removal of eyes and blemishes in order to complete the peeling operation.

THE MARKET GROWER

OFFICIAL ORGAN OF VEGETABLE GROWERS' SOCIETY OF VICTORIA, THE KOONDROOK & BARHAM TOMATO GROWERS ASSOCIATION AND THE SOUTH AUSTRALIAN FRUITGROWERS' AND MARKET GARDENERS' ASSOCIATION.

Vegetable Culture

INTERESTING MARKETING EXPERIENCES — MOTOR TRUCKS HAVE REPLACED HORSE-DRAWN VEHICLES — DRY SEASON AFFECTING CROPS — RAINS NEEDED FOR POTATO CROP — CARE IN GROWING AND HANDLING WHITE ONIONS — PEA MITE CONTROL.

(By Our Correspondent.)

AT the last monthly meeting of the Vegetable Growers' Association, members again stressed the necessity for using every opportunity of bringing under the notice of the public the fact that the Society had changed the name from the Market Gardeners' Association to the Vegetable Growers' Society; it is very generally felt throughout the industry that the name market gardener does not truly define our industry, and members are asked to use the term vegetable grower in all legal and business documents with which they may be dealing.

In looking back over the records to try and find where the term market gardener was first publicly used in Victoria we find in the Melbourne daily paper of 1840 a reference to market gardeners having brought produce, vegetables, butter and eggs to the Western Market for sale, some having carried their goods some distance. Considering the enormous strides this industry has made since the time of the publication mentioned above, it will be clearly seen that it is quite time the business was defined more clearly.

As we look back twenty years at the Victoria Market, we find it the day of horse-drawn vehicles, when fifteen miles from the city was the furthest away one could possibly operate a vegetable garden—for this distance meant a journey of five hours each way at the walking pace of a draught horse; this meant that the bulk of the vegetables were produced around the Brighton district, taking in, of course, Moorabbin, Bentleigh and Heatherton.

In those days even before irrigation was very freely used, there was an enormous amount of business done at the Queen Victoria Market, many hundreds of pounds changing hands before the break of day, but, as the day of the motor vehicle advanced, it was found that the roads had become too smooth and slippery for horses. Transport was too slow, and so the change to motor trucks became general until to-day we have a market where there are no horses standing in the vehicles—for a horse-drawn vehicle must have the horse removed before the start of the market.

Now we have that vast hive of industry, which the market is to-day, when growers come even fifty miles and are able to do the journey more comfortably and quicker than the man with horse used to do his trip of fifteen miles.

So, growers, you will see it is quite time we established the name of an industry which has grown from the day when growers in some cases carried their produce to market on their backs to our present day, when many of our trucks bring in loads of four tons and instead of being congregated in one small area, vegetable growers are now scattered out all over the State, and the industry of producing fresh vegetables for the people of the cities has become one of tremendous magnitude. Anyone who has not visited our market at 5 a.m. would be astounded at the amount of money which changes hands there each market morning.

Cultural Hints.

The dry season and windy weather which we are experiencing are making it very hard to produce good crops. There is no vigorous growth such as should be for the Spring, and in many cases watering is being started to hold the crops in the hope of rain in the near future.

Onions and **Potatoes** are feeling the strain very severely, and as these crops do not respond very well to irrigation, it looks like a light crop of the early sorts.

Land that gets at all sticky when it is wet is not at all suitable for irrigation, for working on this land when it is wet does more harm than good. Early Potatoes are often grown on this class of soil, so, taking into consideration the large area to cover, and usually the poor response this crop gives to irrigation, it is seldom a paying proposition to water Potatoes.

White Onions should now be making a bulb, and should not be roughly handled at this stage of their growth. If the crop has become very weedy, a narrow dutch hoe, carefully pushed through the crop does not do a great deal of harm, but they should not be worked deeply under any circumstances.

If the Mildew Blight is at all in evidence, it is much better not to work through the crop at all, for walking through, brushing against the leaves, seems to spread this blight still further.

It is also inadvisable to work in Onions when the tops are wet, as the breaking of the leaves (which takes place very easily when they are wet) tends to allow blights and pests to attack this crop.

When white Onions are being bunched for market it will be found much easier to wash them clean if the hose is put over them while they are still damp after being pulled out of the ground.

Owing to the dry season neither the Red Spider nor the Pea Mite is giving any trouble this season, and it clearly shows that it is the damp and cold conditions under which this pest thrives best. If a crop has become badly infected with the Spider, and there are any weeds on the land when it is to be ploughed, it is advisable to dust the weeds with Pea Mite Powder; this prevents those insects which are left, from laying any eggs, after the ploughing is done, and helps to make sure of not being attacked in plague form the following year.

There is no doubt that one of the best methods of keeping free from the Pea Mite is to keep all crops clean. In this way you do not give the insect a chance to lay eggs. Ordinarily the eggs stop in the ground until the following year, and then, with the first cold rains in April or May, the eggs start to hatch out, and, if allowed to stop in a crop, multiply very quickly, but if attacked with Pea Mite Powder as soon as any of the pest are seen, and then dusted every ten days, quite an effective check can be kept. Early morning or late evening are the best times to dust.

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THE LUCERNE FLEA.

Control by Parasite Possible.

Improved pastures throughout Victoria are being increasingly affected by the Peat Mite and Lucerne Flea. These pests appear early in Winter, and do their greatest damage to the young germinating plants. Of interest, therefore, is the recent discovery by the Department of Agriculture in Perth of a parasitic mite, which sucks the Lucerne Flea and kills it. This mite is carrying on good work, and will soon be available from other Departments of Agriculture.

Pea Mite (or Red-Legged Spider) is more difficult to eradicate on small areas. A preparation of 50 per cent. superphosphate and a similar quantity of crude carbolic powder mixed together and dusted over the pasture has a severe checking effect on the pest. On large areas this method, of course, is out of the question, and at present little is known how to deal with the mite on an extensive basis. This dust preparation is useful also in killing Cabbage Moth, Slugs, Snails, Cut Worms, Slaters and other garden pests.

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VEGETABLES AT SHOW.

Because of the dry season and general shortage of water, entries of fresh vegetables at the Royal Show were fewer than usual, but the judge's comments were that, considering the unfavorable season, the quality of the exhibits were particularly good.

Mr. R. A. Davie, who has been successful in this section for several years, won the award for best collection of vegetables, with a well-staged display. He also gained several other prizes. Principal prize-takers were Messrs. R. A. Davie, A. and H. Marriott, W. E. Trembath, E. le Page, F. le Page, G. Miller, H. Lindsay and A. E. le Page.

In a fair show of Potatoes the principal awards went to Messrs. A. J. Towers, V. Wilson, G. A. McKay, Miss F. J. Knox and P. and G. Purcell. There were no entries for colored early varieties, mid-season varieties, or late varieties.

PARSNIP CULTURE.

Some Good Points.

FEW garden crops give greater response to good soil, ample moisture and good culture than does the Parsnip. It has many good qualities, including its high food values, keeping quality, and early Spring use when other vegetables are scarce. Against this, however, it requires much hard work, is somewhat expensive to grow, and has a limited demand.

Parsnips will grow in any deep, fertile soil, but rich clay loam is found the best growing soil. It should be worked deep to allow the roots to grow in good shape. Well-rotted manure, worked into the soil being prepared for Parsnips gives good results. If fertiliser is used, a general rule is 25 to 40 lbs. per each 1,000 square feet, or 1,000 to 1,500 lbs. per acre, consisting of 4-5 per cent. nitrogen, 10-12 per cent. phosphoric acid, and 6-8 per cent. potash.

Parsnip seed retains its vitality for only a short period, so that fresh seed should be obtained each season. Half an ounce of seed is estimated to be sufficient for one 100 ft. row or from three to five lbs. per acre, depending upon the width of the rows.

Parsnip seed is slow to germinate, and in heavy land germination is assisted by covering the seed with leaf mould, sandy loam or other suitable material which will not pack. Rolling the land after seeding usually hastens and improves germination.

"She doesn't look her age."
"No, she overlooks it!"

Motor Cars, Trucks, Tractors

Driving Position Causes Accidents.

Many motorists will agree with "Jehu," who writes in "The Radiator" (offical organ of the R.A.C.V.), the following blistering criticism of modern car design:—

After 20 years of driving, confined almost exclusively to cars of the sports and semi-racing types so often criticised adversely by those whose experience is confined to more conventional designs, I recently had my first experience at the wheel of a large 1938 saloon car of excellent performance and moderately impressive price. As a result of a thoroughly uncomfortable two hours, I have ceased to wonder at the number of road accidents which occur, and only marvel that there are not several times as many.

Mechanically, I have nothing but praise for the car. Its steering was of needle's eye accuracy, self-centring and sufficiently direct for emergency usefulness. The engine was astonishingly flexible, and it had lively acceleration, and the brakes were the last word in efficiency. The suspension combined comfort with a creditable degree of stability and road-holding.

But the driving position was appalling—there is simply no other word for it. I am tall—slightly over six feet—and of normal proportions regarding length of body and neck, but sitting bolt upright, my view of the road began somewhere about 20 feet away from where unnecessary chromium ornamentation reflected dazzling sunlight into my eyes. There was no trace visible of front guards side lamps or anything else to act as a width indicator, and heavy side-pillars produced an embarrassing blind spot on each side, especially on the right, where I should have had the clearer view.

I have never been more acutely uncomfortable when driving a car than I was in this "splendid" modern equipage at a modest 25 m.p.h., when I had to pass another car going in the other direction on a country side road fenced right to the edge of the gravel. I set my teeth and waited for mudguards to start scrunching on one side of the other, but nothing happened. I resolved to stop dead next time.

Personally, I should like nothing less than to have to learn to drive in such a car, when it proved an ordeal after an experience of cars and motor cycles totalling about 250,000 miles, and my next greatest aversion would be to have to drive one now. But it has at last made me understand the reason why one is constantly exposed to danger on mountain roads through the unwillingness of so many people to give adequate road space or to corner correctly if by so doing they must venture reasonably near the edge of an embankment.

It is time that some of the blame for accidents was lifted from the shoulders of drivers and sheeted home where it properly belongs; to manufacturers who have foisted on the public a so-called "racy" appearance which merely provokes laughter in anyone with experience of real racing, and the car it breeds. Builders of cars for serious speed competition think only of efficiency and the maximum of safety. Manufacturers of cars for ordinary road use should be able to sell safety to the public, and should lose no time about doing so. Otherwise they will find that motoring will become so hedged about with restrictions imposed in an effort to check accidents that sales will decrease seriously.

TAKE A RINGSIDE SEAT at the wheel of a Chevrolet Utility. Watch the way it goes into action. Quick, nimble, powerful, weaving in and out of traffic, Made of tough stuff to take plenty of punishment. Built to make the grade over any number of "rounds," to stand the racket of long, fatiguing work.

Whether these Chevrolet Utilities are rushing, "stop and go" style, through the city with light deliveries, or whether they're loaded to the plimsol with bags of spuds, you'll find them ready and eager, full of "fight," on the job one hundred per cent.

These Light Weight Champions of the World are priced as low as £239 for the chassis, and there are models ranging all the way up to the Heavy Weight Champions—the Chevrolet "Maple Leaf" Trucks priced at £330. All of them are bristling with robust features that have stood up to the gruelling "drive to destruction tests" on the factory's proving ground. Come along and see them in action. Come along and see what a wealth of value your money can buy you when you choose a Chevrolet—Public Favorite No. 1. Terms to suit your purse! Demonstration gladly given.

Features of the 10-12 and 15 Cwt. Capacities Include: Powerful 85 h.p., 6-cylinder Overhead Valve Engine that operates economically, New Diaphragm Spring Clutch for smoother, quicker response and ease of operation. Redesigned Valves and Cooling System for faster dissipation of heat away from the combustion chambers. Perfect 4-Way Lubrication System Improved Electrical System including a new "positive engagement" Starter Mechanism with over-running Clutch. Automatic Throttle advance for quick starts. Perfected, "Full Contact," self-energising Hydraulic Brakes that are much superior to ordinary hydraulics. Maximum length, easy-riding Springs. Chassis Frame of Box Girder Construction (10-12 cwt.). Channel Steel Frame (15 cwt.). Synchro-mesh Gears. Holden "Turretop" all-steel Cabs. All types of bodies available, all are designed to give maximum loading space.

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For having fraudulently altered the mileage indicated by the speedometer on a used car, an American dealer was recently ordered to pay 2,000 dollars in punitive damages.

SAFETY FOR CYCLISTS.

If every cyclist took a ride in the front seat of a car at night, preferably on a rainy night, he would realise the very grave risks involved in riding a bicycle without adequate rear lighting. Even in streets described as well lighted it is difficult to see a cyclist in misty rain, and the motorist travelling at even 25 m.p.h. is liable to see him too late to avoid an accident. Sometimes slush is splashed on to reflectors, obscuring them; sometimes the tail of an overcoat will hang down over a light placed under the saddle; in both these cases the cyclist is dangerously unconscious of his risk, and should be reminded by the first motorist passing him. But in far too many cases, especially outside the city, no rear light is carried.

A German invention is to place reflector buttons on each pedal. The up and down movement is said to make the buttons conspicuous from the rear, and although they are liable to be dimmed by slush, they are inexpensive and a useful additional safeguard.

ROAD DANGERS.

Special Committee Formed.

A conference representative of all interested in reducing road accidents was held in Melbourne on August 30, and the subject was thoroughly discussed from all angles. Mr. Patterson, President of the R.A.C.V., who convened the meeting, pointed out that Australia's figure of 13.9 accidents per 10,000 cars was good compared with that of most countries, the highest being India, with 93, Italy, 59.4, Switzerland 50 and Germany 48.6, but our proportion could be greatly reduced.

Mr. Duncan, Commissioner of Police, said that the police force would give full co-operation in any measures adopted. He said that 88 per cent. of the accidents were due to carelessness, and could be avoided. Regulations had not the slightest effect on some drivers, and these should be prevented from holding licences.

A sub-committee was appointed to report on the subject of reducing road accidents, the members being representatives of the R.A.C.V., National Safety Council, Tramways Board, Education Department, and Commercial motor interests, and the Municipal Association. The following bodies will be represented in an advisory capacity: Police Department, Country Roads Board, Railways Department and Illuminating Engineering Society.

SIX CYLINDERS POPULAR.

Six-cylinder motor cars were almost twice as popular with the driving public in 1937 as any other type, according to a recent survey.

Mr. Feely's survey revealed that 2,214,336 six-cylinder cars were sold during the year of 1937, or 63.6 per cent. of the total of all cars sold. Automobiles of the eight cylinder type were second in popularity and totalled 1,189,808 sales during the year, or 34.1 per cent. of the total.

"The six-cylinder engine has shown substantial increase in popularity since 1934, when 59.5 per cent. of the total cars sold were powered by that type of engine," said Mr. Feely. Eight-cylinder cars comprised 39.8 per cent. of total sales in 1934, and 34.1 per cent. last year.

"In the four-year period, Chevrolet has delivered more passenger cars than any other manufacturer, leading the entire industry in three out of the four years."

NEW WAGES LOG.

Substantial Increases Demanded.

A new log of wages for employees engaged in fruit harvesting, packing, and forwarding, dehydrating, processing, etc., has been served by the A.W.U. upon a number of growers. The rates claimed range from £3 for children under 15 years up to £6/5/- for those engaged in fruit harvesting operations; £7/10/- for classers down to £5/6/- for shovellers in the packing and forwarding schedule; from £5/18/- for dipmen to £5/12/- for general hands in dehydrating; and from £6/10/- to £5/12/- for factory workers.

Growers who have been served with the log should notify Mr. S. P. Cornish, Secretary of the Northern Victorian Fruitgrowers' Association, Ardmona. The growers' defence organisation will thereupon deal with the matter.

Gummosis (Dieback) Disease in South Australian Apricot Trees

Progress Report on Investigations

(By D. B. Adam, B.Agr.Sc., Plant Pathologist, Waite Agricultural Research Inst., in the S.A. "Journal of Agriculture.")

(Continued from September Issue.)

PROOF THAT A FUNGUS IS THE CAUSE OF THE SOUTH AUSTRALIAN APRICOT GUMMOSIS DISEASE.

THE experiment was started in 1934. The fungus used for inoculation purposes was isolated from a diseased Apricot branch from McLaren Vale and grown on "potato dextrose agar" as a pure culture. Two healthy trees, "Moorpark" and "Shirley's Blenheim" growing at the Government Orchard at Hackney were used for the experiment. On each tree two positions, where branches about two inches in diameter arose from the main limbs, were selected. After surface disinfection with 90 per cent. alcohol these branches were cut off close to the main limb with a clean saw and provided the site for inoculation. Two of these positions (one on each tree) were then inoculated by applying pieces of the pure fungus culture and labelled 3a and 3b; the other two, to serve as controls had pieces of sterile agar applied to them and were suitably labelled. After the above treatment, the wounds were covered with moist sterile cotton wool held in position by cellophane. (In later experiments it was found that a piece of thin tinfoil such as that used for wrapping chocolates, applied to cover the wound and held in position by a bandage, provided an easily applied and effective cover where such was required). The inoculations were done on September 3, 1934, when the trees were starting to bloom.

The first examination of these inoculations was made on December 21, 1934, when the bandages were removed. It was observed that both the wounds inoculated with the fungus were gumming freely. In one case no callus formation had occurred and the surrounding bark tissue had collapsed. In the other case a slight callus had formed. The controls in both cases were well callused and free from gum. During the remainder of the 1934-35 growing season the inoculated wounds continued to gum freely, the area of dead bark around the wound increased and splitting occurred.

On November 12, 1935, when the fruit was about a quarter grown, the leaves on the portion above the point of inoculation on one branch were wilting rapidly. Subsequently experiments with other inoculations indicated that death of the limb in this case had occurred with unusual rapidity but its manner was quite typical of that occurring in natural infections. The other infection (3a) continued to gum freely during the 1935-36 season, but wilting of the leaves did not occur. The control pruning cuts remained healthy throughout.

In June, 1936, portion of the branch bearing 3a was removed and split for examination. This revealed that the wood for a distance of seven inches below but on the same side as the point of inoculation was discolored in the characteristic manner already described. A fungus similar to that used for inoculation purposes was isolated from the interior part of the wood at a distance of six inches below the point of inoculation. The same pieces of diseased wood also produced the characteristic fruiting bodies and spore-masses, which have been found on naturally infected wood. These spore-masses were used subsequently to make suspensions with which further successful infections were induced.

Having established the fact that the disease was caused by a fungus isolable from the wood of a diseased tree as in the experiment just described and at the same time in five other equally successful cases where the fungus was isolated from distinct sources, a fuller investigation of the requirements for a successful infection was undertaken.

The kind of questions for which answers were sought may be formulated in the following terms:—

1. Can the spore-masses produced on naturally infected wood or in artificial culture media induce infection in the same way as the mycelium from a pure culture?
2. What kind of wound, if any, is necessary to infection?
3. How is the disease spread from tree to tree?
4. Are any of the commoner Apricot varieties resistant to the disease?

Investigations bearing on the question of control measures are also being undertaken. For the most part this work has only been started recently and nothing as yet can be said about the results. On the other hand the Horticultural Division of the Department of Agriculture has been carrying on work designed to eradicate the disease from an affected orchard and the progress of this work is to be described separately.

The progress which has been made in securing answers to the foregoing questions is described below. It is necessary to emphasise here again that the results in a number of cases are not yet complete. To complete the proof that a suspected infection is in fact one of "gummosis" it is considered desirable that the associated fungus be re-isolated from the diseased area. To do this generally requires that the branch under consideration be removed, which means, of course, that further study of the progress of the disease is prevented Actually, in a representative number of the cases described below, this re-isolation has been done and the evidence is quite complete. Incidentally it may be said that in no case where an infection has been suspected and the re-isolation done have we failed to secure the causal fungus. For the present then, it can be fairly assumed that a high proportion of the cases suspected to be infections are actual infections.

1. Mycelium Versus Spores as Inoculum.

Most of the earlier inoculation experiments were done with mycelium, partly because it could be handled more easily and partly because the production of spore-masses does not occur freely in culture.

We have now the results of 40 comparable inoculations, half with mycelium and half with spore suspensions from different sources in which the relative efficacy of "spores" and "mycelium" in promoting infection may be compared. Of this total four were made in 1934, 28 in 1935, and eight in 1936. Altogether nine different Apricot varieties were inoculated, the same number of inoculations with each kind of inoculum occurring on each tree. By August, 1937, 14 of the 20 inoculations with spore suspensions were positive. Of the 20 inoculations where mycelium was used 11 are definitely positive, with four others which are still doubtful. Of the six inoculations with spore suspensions which have not yielded evidence of infection to date, three occurred on one tree (variety "Syrian").

2. Relation of Type of Wound to Infection.

Field observations on the disease suggest that most "gummosis" infections start in the neighborhood of pruning cuts, indicating that some such injury is a prerequisite to infection. Consequently, a series of experiments designed to throw light on this question were undertaken. Comparisons were made between pruning cuts of varying size which expose the wood, "bark wounds" and no wounding. The fungus was introduced either as a pure culture or mycelium or as a spore suspension.

Table I. gives the results obtained up to August, 1937.

From the results given in this Table the following conclusions can be drawn:—

(1) The introduction of the causal fungus to the wood either in the form of mycelium or as a spore suspension led to a high proportion of successful infections.

(2) Applied to uninjured bark the same fungus was unable to induce infection.

(3) The degree of success attending the inoculation of "bark wounds" was greater where mycelium rather than a spore suspension was used. The success also depends on the depth of the wound. The one successful infection with a spore suspension occurred in a deep "bark wound" where the cambium may have been injured. The successful mycelial infection in 1935 was a similar type of wound. The vigor of the mycelial culture is probably also important in determining "bark wound" infections. The eight inoculations in 1936 were effected with cultures isolated from four different sources but were all young cultures actively growing on the agar just prior to the time of inoculation. In 1935, on the other hand, all the cultures were at least two months old and had ceased active growth. The same cultures, of course, were used for the "wood" inoculations as were used for the "bark" inoculations

3. Relation of Size of Wound to Infection.

Having ascertained that an injury to the limb, especially one which ex-

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Table I.—The relation of different kinds of wounds to infection.

Site of Inoculation.	Inoculation.	Year of Inoculation and Numbers of Inoculations. 1934. Total	1934. No. Positive	1935. Total	1935. No. Positive	1936. Total	1936. No. Positive
Wood (pruning cut)	Mycelium	9	9	4	3	4	4
Wood (pruning cut)	Spore suspension	2	1	4	3	4	3
"Bark wound"	Mycelium	2	1	6	1	8	8
"Bark wound"	Spore suspension	2	0	7	1	8	0
Uninjured bark	Mycelium	2	0	—	—	4	0
Uninjured bark	Spore suspension	—	—	—	—	4	0

Table II.—Relation Between Age of Wood Cut and Susceptibility to Infection.

State at August 10, 1937.

Inoculations Made. Age of Wood.	Spore Suspension. Tilton.	Spore Suspension. Syrian.	Mycelium. Tilton.	Mycelium. Syrian.
One Year Old	†	†	†	†
Two Year Old	*	†	†	†
Three Year Old	*	†	†	‡
Five Year Old	*	†	†	*
Seven Year Old	*(a)	*	‡	*(a)
Nine Year Old	*(b)	*	‡(b)	*

*Positive result. †Apparently negative result.
‡Doubtful result.
Note.—(a) Branch apparently eight years old.
(b) Branch apparently ten years old.

Table III.—Relation Between Types of Cut and Susceptibility to Infection.

Kind of Cut Inoculated.	Inoculum.	Varieties Inoculated. La Delicieuse.	Trevatt.	Bobby Allen.	Triomphe de Russieres.
Fruit spur	Mycelium	*	†	‡	†
Fruit spur	Spore suspension	†	†	*	*
Branch	Mycelium	†	*	*	*
Branch	Spore suspension	*	*	§	§

*Well defined infection. ‡Doubtful infection.
†Apparently negative. §Not inoculated.

poses the wood, is necessary for infection, it becomes a matter of practical interest to know the relative chances of infection of wounds of different sizes. Ordinarily in the course of pruning Apricot trees the majority of cuts are made in young wood of the previous season's growth, a smaller season's growth, a smaller proportion deal with fruit spur growth while a much smaller proportion still involve fairly large cuts where a saw may have to be used to correct some fault in the framework of the tree.

A number of the experiments where branches of different sizes were inoculated may now be dealt with.

In the first experiment, which was conducted in 1935 on two varieties, "Tilton" and "Syrian," the differences between the branches inoculated were based on relative ages. In the younger branches age could be fairly easily calculated from the evidence of pruning cuts in previous years. The age of older branches was estimated from the number of annual rings to be seen in the cross section that was inoculated. In practice this is a difficult task in the field and the ages as stated may not be exactly correct. The inoculation made and the results as shown in an examination made on August 15, 1938, are given in Table II.

In this experiment some of the "mycelial inoculations" into the one and two year old wood in their early stages appeared, from the evidence of gumming, to be infected, but these did not develop further. At the time of the latest examination a detailed study of the two year old "Tilton" wood inoculated with mycelium showed no sign of infection, nor could the "gummosis" fungus be re-isolated, which, as has been pointed out, is normally an easy matter where infections occur. In other experiments comparisons were made between the inoculation of the freshly cut ends of fruit spurs and of cuts where small branches were removed. Results to August 10, 1937, of inoculations made in this way in September, 1935, are brought together in Table III.

The fruit spurs selected for inoculation were all fairly old ones, but their diameters were all ¼ in. or less at the point of cutting. It is evident from the results that the cutting back of these spurs, which is a normal pruning practice, provides a situation at which infection can occur.

4. Effect of Delay Between the Time a Cut is Made and its Inoculation.

A matter of practical importance to growers is covered by the question of how long a period after a cut is made is it susceptible to infection. Both in 1935 and 1936 experiments were set up to obtain information on this point. Unfortunatly, however, the inoculations wherein no delay occurred between the making of a cut and its inoculation have shown a rather high proportion of negative results. As these inoculations were intended to serve as controls for the inoculations where a delay occurred between the making of the cut and its inoculation, the discussion of results is not worth entering upon for the present.

Transmission of the Disease.

In the short account that was given of the life history of the fungus causing this Apricot "gummosis" disease it was pointed out that, in the presence of sufficient moisture, the mature fungus produced sticky spore-masses. It has also been shown that a suspension made from these spores when introduced to a suitable cut on an Apricot tree, can induce typical symptoms of "gummosis." It would be a matter of interest to know how far infections are initiated in natural circumstances by means of these spores. From our knowledge of the conditions under which they are produced, and from a consideration of the spore masses themselves their role is possibly only quite a limited one. They may, when washed down from an infection established high on a tree, serve to infect cuts made lower on the branch or they may even be carried to nearby trees during wet, windy weather. Spores produced in the way described hardly seem to account for the widely separated infections sometimes found in orchards nor for the infection of isolated trees which are to be found in many backyard gardens in Adelaide.

It seems likely that at present we are not in possession of all the facts concerning the life history of the fungus and that fuller knowledge in this direction must be sought after. At the same time it should be stated that there is one very common operation by growers, that of pruning, which may serve as a means for propagating the disease. An endeavour has been made to secure experimental information on this question, and the methods used and results obtained will now be described.

Transmission of Disease by Pruning Tools.

Most of the experimental work was done with the pruning saw because of (1) the greater likelihood of its natural contamination, and (2) that a saw is likely to be employed for making the larger cuts through which

(Continued on page 35)

"HILLMAN" ORCHARD STRIP PLOW

Double Furrow

A sturdy, strong plow equipped with reversible discs to enable the operator to plow up to, or away from the trees. Operated by a single lever and with nothing to catch branches of trees. To facilitate the movement of the plow around the orchard the discs are movable and lift clear of the ground.

The steering arms are drop forged from the best mild steel and the main wheels are equipped with ball bearings.

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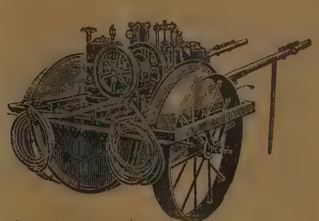

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(Continued from page 18.)

Fruit Juice Syrups.

Fruit juice syrup is made by the addition of cane sugar in sufficient quantities to give the syrup a Brix reading of 50-55 deg. In the annual report of the Agricultural and Horticultural Research Station, Long Ashton, for 1936, full details of methods used in commercial production of fruit syrups were given by Mr. V. L. S. Charley. An additional year's experience was obtained in 1937, when Messrs. H. W. Carter & Co. Ltd., manufactured 150,000 gallons under Mr. Charley's direction. Experience showed that for various English fruits the juice required approximately one ton of sugar per 200 gallons to convert it into syrup. This syrup was stabilised pending bottling, by SO_2 at the rate of 300-350 parts per million, obtained by the addition of potassium meta-bisulphite. Syrups made in this way contain about 60 per cent. pure fruit juice—the standard set in England for National mark syrups. They were sold at 7/- per gallon wholesale in gallon jars. Primarily intended for flavoring of milk drinks, they were also used for the making of aerated fruit drinks, containing approximately 20 per cent. of syrup. For Australia, the possibilities of eventually making Apple syrup appear worthy of investigation.

Carbonation.

A percentage of the juice consuming public will be expected to prefer a carbonated juice, because of the extra "bite" given by the carbon dioxide. Fruit juice stored by the Seitz-Boehi process is impregnated with carbon dioxide to give it the necessary stability, and for Australian conditions it is probable that all the carbonated juice required would be obtained from this source. Should this not be so, fruit juice can readily be carbonated at certain convenient stages prior to capping by impregnating equipment in common use by manufacturers of mineral waters. For economic reasons, it is considered that "tube" or "bottle" carbon dioxide would be the most economical source of the gas for fruit juice manufacturers. Details of equipment for obtaining carbon dioxide from soda bicarbonate and sulphuric acid are, however, available should they be required.

De-aeration.

Some recent small scale experiments suggest that, in order to improve the stability and flavor of the juice by prevention of work of the oxidase enzymes, de-aeration of the juice by spraying it into a vacuum is desirable. Further work in this direction is being awaited with interest. Should the early indications be confirmed by further experiments and by commercial experience, information concerning its place in the production schedule will be forwarded.

Fields of Activity of the C.S. and I.R. and the Department of Commerce.

It is considered that ample dependable information is available to permit of the immediate establishment of a fruit juice industry in Australia. It is recommended that the Department of Commerce should proceed immediately to stimulate commercial interest in the new industry, which promises to be of great importance to the Apple growers throughout the Commonwealth. It is suggested that the Apple and Pear Export Council, and especially its marketing committee, the State Horticultural Departments, financial interests in the Apple industry, the fresh milk companies in each State, and the Railway Commissioners in each State might be given a summary of the above scheme of Apple juice production, and invited to co-operate with the Department of Commerce in putting into operation an effective scheme for large scale commercial production of Apple juice. A national publicity campaign will be necessary to stimulate interest in a beverage which is the liquid equivalent of a foodstuff essential to the health of young and old, and could be so conducted as to gain the sympathetic support of the majority of the nation. Some detailed information of methods employed in Europe will be forwarded later.

Many technical problems, peculiarly Australian, will need careful investigation by trained research workers. These are naturally the province of the Council for Scientific and Industrial Research. A special memorandum covering this field of activities is being prepared by Mr. N. E. Holmes, C.S.I.R., Liaison Officer in London, and myself, when certain more technical details concerning the various processes outlined will be submitted. In the meantime, it would be appreciated if a copy of this report could be made available to the Council for Scientific and Industrial Research.

Close attention is being given to developments in England and on the Continent, and as new processes become established, or further details become available, they will be forwarded.

Composition and Nutritive Value of Feeding Stuffs.

	Average composition per cent. as shown by analysis.						Digestible nutrients per cent.						Calculated from digestible nutrients. Per 100 lb.				
				Carbo-hydrates.						Carbo-hydrates.							
	Dry Matter.	Protein.	Oil.	Soluble.	Fibre.	Ash.	Crude Protein.	Pure Protein.	Oil.	Soluble	Fibre.	Nutrient ratio (app.)	Gross digestible energy as starch.	V.	Starch Equivalent.	Hay Equivalent.	Linseed Cake Equivalent.
Apple-Pomace, fresh	25.8	1.5	1.1	17.1	4.7	1.4	0.7	0.5	0.5	11.9	—	18	13.7	92	12.4	—	17
Apple-Pomace, dried	88.3	4.0	3.5	51.8	27.2	1.8	1.6	1.2	1.7	36.3	1.7	26	48.6	78	32.3	—	44
Pear Pomace, dried	95.3	5.6	4.2	53.9	30.1	1.5	—	—	—	—	—	—	—	—	—	—	—

Fruitgrowers' Requisites

Interesting Fxhibits at Royal Melbourne Show

SITUATED in various parts of the Melbourne Showgrounds, were interesting displays of machinery, implements, packing equipment, sprays, etc., and every opportunity was afforded visitors to view working demonstrations.

At the stand of **Messrs. H. V. McKay Massey Harris**, the implement of particular interest was the new "Sungrubber" utility tool which provides a new service in vineyard cultivation. The "Sungrubber" is supplied with seven or nine tynes, and mouldboard plough and disc harrow attachments are also available. Other items of interest on the stand included Sunshine Massey Harris Orchard Tractor, with steel or rubber tyres, and a complete range of orchard implements and motor spraying outfits.

The stand of **Messrs. Daniel Harvey Ltd.** was a particularly active one on account of the working demonstrations given in fruitgrading and packing-house equipment, including polishers (the new horsehair belt brusher was a feature of this machine), Apple and Pear washers, fruit graders in various sizes. In the implement section, Tractor Power Lift Spring and Rigid Tyne Cultivators, Patent Offset Tandem Disc Cultivators, 3-Furrow Tractors and Petty Ploughs and other implements attracted much attention.

The **Sulphate of Ammonia** distributors had an attractive stand and many enquiries were received in regard to this fertiliser. A good demand was reported for the new and interesting little book recently published by Nitrogen Fertilisers Pty. Ltd. The author of the book, Mr. R. A. Boyle, M.Sc., is well known to fruitgrowers throughout Australia, and in addition to including much interesting advice on the use of nitrogenous fertilisers, contains some excellent colored illustrations.

The Bave-U Power Sprayer was demonstrated at the stand of **Messrs. Russell & Company.** The underslung model which has been enthusiastically received in fruit areas throughout Australia was of particular interest.

Judging by the number of callers at the stand of **Messrs. Victor Leggo & Farmers Ltd.**, their cordial invitation to growers to visit them whilst at the Show was taken advantage of. A complete range of Vallo sprays was exhibited at this stand.

Messrs. Ronaldson Bros. and Tippett Pty. Ltd. demonstrated their motor spray plants. A size and type of Ronaldson-Tippett spraying plant is to be found for every kind of orchard. Many outstanding features included in this spraying equipment are the result of years of close observation for fruitgrowers' requirements.

Messrs. R. Werner & Co. Pty. Ltd. demonstrated their refrigerating plants and received many enquiries, particularly from private growers who are contemplating the installation of stores on their own orchards. The advantages of the privately-owned store are being realised more each year.

On the **Preston Motors** stand, Chevrolet cars, trucks and Buick cars were exhibited, and growers showed their keen interest in this very interesting and attractive stand.

The Howard Rotary Hoe demonstrated modern methods of cultivation. In one operation this rotary hoe effectively chops up, kills out, and mixes with the soil such superfluous growth as thistles, bracken, couch grass, paspalum, etc.

The Gerrard Wire Tying Company's stand was always a source of interest, and everything necessary for wire-typing equipments and packing house supplies was to be found at this stand.

The English Fordson Tractor, together with the famous Oliver plough, were demonstrated at the stand of **Messrs. Malcolm Moore Ltd.** Judging by the sales of Fordson tractors which have taken place in recent years, the tractor is rapidly becoming part of the orchard equipment for carrying out such jobs as ploughing, cultivating, harrowing, spraying, timber cutting, pumping, hauling transport to markets.

The famous Blackstone Diesel Engines were on view at the stand of **Mitchell & Co. Pty. Ltd.**, West Footscray. This engine is available in sizes from 10 to 320 horse power. Other lines of interest to orchardists on this stand were motor spray outfits and orchard implements.

At the stand of the **Vacuum Oil Company Pty. Ltd.**, Gargoyle white spraying oil was featured, this now being largely used as the chief Summer control medium for various types of infestation, plus either lead arsenate or nicotine sulphate. Gargoyle sprays are perfectly compatible with all other insecticide and fungicidal sprays and are either highly acid or highly alkaline.

The Neptune Oil Company's stand was of interest to fruitgrowers because of the comprehensive lines which are put up under the Neptune name, including Red Spraying Oil, Palsol, Clarigol, White Spraying Oil, Lime Sulphur Solution, Blueston-, Colloidal Lead Arsenate, Berger's Arsenate, etc.

The International Harvester Company: The McCormick-Deering 0-12 Tractor was the chief line of interest at this stand. This tractor has been specially designed to help orchardists overcome the difficulties associated with work between and at the base of trees. This is not only designed for implement work, but also for use on spraying outfits.

Messrs. Trewhella Bros. had their usual display of tree pulling and grubbing machines. The Monkey Grubber, which is a combination of many time and labor-saving devices, was an outstanding feature.

At the stand of **Messrs. Hillman & Keogh**, the orchard strip plough was demonstrated. This sturdy, strong plough is equipped with reversible discs to allow the operator to plough up to or away from the trees.

The fruit-grading machines at the stand of the **Lightning Fruit Grader Company** were always a source of interest, particularly the working models which attracted large crowds of city as well as country folk. All types of Lightning packing house equipment was exhibited, including washing, sterilising, drying and polishing outfits, sizers, dehydrators, lidding presses, etc. The offset-disc-cultivator was outstanding amongst the many implements that were exhibited on this stand.

Export & Commercial News

APPLE AND PEAR EXPORT.

Organisation Bill Discussed at Box Hill.

About forty fruitgrowers were in attendance at the Box Hill (Vic.) Town Hall on September 29, 1938, convened to hear the Assistant Minister for Commerce (Mr. Cameron) give particulars of the proposed Apple and Pear Export Organisation Bill. However, owing to the strained international situation the Minister found it impossible to attend. Owing to the wide publicity it had been decided to continue with the meeting. The Mayor of Box Hill (Cr. Hogan) presided.

At the request of the local committee, Mr. F. Moore, a member of the Executive of the Victorian Fruit Marketing Association and the Australian Apple and Pear Council, gave particulars of various stages leading up to the introduction of the measure. He made it clear that his remarks were neutral and were given for the purpose of information only. Mr. Moore dealt with the short notice given to the industry regarding the decision to introduce the legislation and the endeavours of the Minister to reconcile conflicting views. The Canberra Conference in June approved of the measure in principle (Victoria not voting, and Tasmania having to refer the matter back to the State Fruit Board). However, the Tasmanian State Fruit Board had later opposed the Bill and the Government had decided to defer the introduction until October.

After reading a statement prepared by Mr. Cameron, answering objections which had been raised, Mr. Moore stated that the principle justification the Government had for introducing the measure was the probability of the setting up of an international body to regulate the United Kingdom markets by quota.

Mr. L. G. Cole, Tyabb, expressed concern at the stage of the developments in relation to the setting up of the Board which apparently had come from the Agricultural Council and not from the growers.

Mr. W. A. Thiele said one danger appeared to be that the Board would have power to dictate to individual growers the quantity of fruit they must export.

It was decided to request the V.F.M.A. to take up this matter with the Minister. It was also decided to request Mr. Cameron to address a meeting at Box Hill at a date to be arranged.

TRADE WITH N.Z.

Admission of Australian Cherries and Other Fruits into N.Z. Desired.

The annual conference of the Fruitgrowers' Federation of N.S.W. recently requested that negotiations with New Zealand should be continued with the object of having the embargo on Cherries removed.

The resolution was sent on to the Australian Department of Commerce, and the Board has now been informed that the marketing of all types of fresh fruit is receiving consideration by the N.Z. Government. Latest advices, however, seem to indicate that the restriction of Australian fresh fruit, with the exception of citrus, is likely to continue this season. It is expected that the N.Z. Government will eventually extend its operations to the importation of fresh fruits, and it is hoped that imports from Australia will result. The Department states that all steps possible are being taken to achieve this.

CALIFORNIAN CONDITIONS.

Mr. Ken Weeding Gives Some Impressions.

In a letter from California, Mr. Ken Weeding, manager of S. J. Perry & Co., of Melbourne, who with Mr. Arthur Perry, is on a visit to America, gives some interesting information regarding his tour, and of conditions in the great fruit-growing State from which he writes. The following are some extracts:—

"We visited the University of California, where we gained an encyclopedia of information and will bring back with us many interesting books that have been issued by the Gianini Institute of Agriculture. We intend to visit Sacramento next week and will call on the Director of Agriculture. Unfortunately, the industry is in a deplorable condition. Cling Peaches are being sold to the canners at prices much below those ruling in Australia, and this is disastrous to the growers. Bartlett Pears are also being given away. In fact, the whole industry is upside down, and what the ultimate outcome will be is too difficult for any one to say. There is no doubt there is a considerable overproduction, but, the fruit being on the trees, the grower naturally attempts to obtain some value for it. As far as the Bartlett Pear industry is concerned, the Government endeavoured to set up a pro-rate for it, which is actually the same as a control board, but the growers did not favor this idea and the market was left open. You know, of course, that the greater proportion of America's fruit is consumed locally. This meant that the market became flooded at the ouset with immature, undersized fruits, and the huge markets in the east, such as New York, were just overcrowded with Bartletts from California to such an extent that they will not make their rail freight across the Continent. I have just met the manager of the White Service, who is touring the States on behalf of his firm, which is his usual custom at this time of the year, and he tells me that for the past four years he has not seen such a deplorable state of affairs.

"We have had the opportunity of visiting one particularly good orchard, which produced 150,000 cases of Winter Pears of the varieties Beurre Hardy, Beurre Anjou, Doyenne du Comice and Winter Nelis. They were actually packing Hardys at the rate of 3,000 cases per eight hours, while we were present, and the quality of the fruit was so wonderful that our eyes nearly popped out of our heads. We followed the whole procedure from the time the fruit was picked from the trees until it was packed and ready for transport, and what a wonderful system it was! However, we were told that we will see much better sheds than this one, and I understand that we will visit the shed at Placerville next week, where the weekly payroll is in the vicinity of 50,000 dollars. I am indeed looking forward to visiting all these places of such wonderful interest, so that we can at least attempt to learn something from the people who have shown the people how to handle and pack fruit."

CONDITIONS AT DARLING HARBOUR.

"Appallingly Inconvenient," says Witness at Fruit Enquiry Commission.

FOR MANY YEARS past the Fruitgrowers' Federation of N.S.W. has earnestly sought to have improvements made for the receipt and delivery of fruit at the Darling Harbour Railway Yards, Sydney. The unsatisfactory conditions to which the Federation has repeatedly directed attention were referred to by witnesses before the Fruit Industry Commissioner (Mr. McCulloch, S.M.) recently.

Criticisms were in relation to insufficient room for the trucks during peak periods, lack of shelter—delivery having to be taken under all weather conditions—lack of platforms, and inefficient lighting system. The witnesses stated that at many sidings where fruit was delivered men had to go into the trucks with pieces of candle or to strike matches to see what they were doing.

Wharfage Insufficient Also.

Witnesses stated that wharfage accommodation for interstate fruit was totally inadequate, and delays were costly. One witness stated that the rate of payment for the cartage of Tasmanian fruit to the markets was unprofitable, because of the long time that carriers had to wait for loading. Although fruit was not available until noon, it was necessary to be at the wharf at 6 a.m. in order to secure a place on the route.

A historian reminds us that woman used a mirror even in the days when many wielded a club. Just to see if her head was on straight?

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TRADE WITH THE EAST.

Unregulated Consignments Deplored.

IN ORDER to improve the conditions surrounding the export of Apples to the Near East, the Australian Apple and Pear Council has set up an Eastern Trade Committee. A conference on this subject will be held at Sydney on October 10.

As illustrating some of the present difficulties in the trade, a letter has been received by an Australian fruit exporting organisation from a merchant in an important Indian centre, in which the following is stated:—

"It is a source of great regret to us that your experimental shipments this year should have turned out so badly. In the past, imports of fruit from South Africa and Australia have been confined mainly to us in reasonable quantities, with the result that we have been able to make the market and ensure a reasonable return to growers, but now that growers and merchants all over Australia, Tasmania and New Zealand are making indiscriminate shipments to local importers, some of whom are quite unprincipled and without finance, we have lost control of the market, with the result that prices have dropped by about 40 per cent., owing to these local merchants selling at any figure to enable them to get ready cash to carry on their business.

"It is quite impossible to forecast prospects for next season, but you may rest assured we shall not recommend you to make any shipments unless we are convinced that there is a reasonable chance of your being able to make a profit, which means to say that imports from Australia must be limited if the market here is to recover."

This latter speaks eloquently of the need for a system of regulating exports. It is perfectly obvious that the growers cannot hope to find profitable markets, particularly in the East, while conditions such as those described prevail in importing centres.

FRESH FRUIT IMPORTS INTO PALESTINE DECREASE IN 1937.

THE IMPORTATION of fresh fruit into Palestine, which rose from 3,144 tons in 1931 to 13,847 tons in 1936, suffered a slight decrease in 1937. The chief variety imported is Apples, followed by Grapes and Apricots in that order. Pears to the quantity of 811 tons are included in "other fruits," of this quantity 660 tons came from U.S.A., 111 tons from Italy, 17 tons from South Africa, and 16 tons from Yugoslavia. The total imports in 1937 represented 13,756 tons comprising Apples 5,363, Grapes 1,784, Melons 216, Apricots 1,098, Dates 375, and other kinds of fruit 4,920 tons.

The bulk of Apricots, Grapes, Dates and Melons came from Syria, Egypt and Cyprus, whilst "other kinds" came from Syria (1,540 tons), U.S.A. 1,121 tons, Cyprus 258 tons, and Italy 136 tons. Turkey, which formerly contributed the greatest quantity of Apples, only sent 539 tons in 1936, and was passed by U.S.A. with 4,059 tons or nearly 60 per cent. of the total. Australia, Rumania and Syria has lately increased their supplies of Apples to Palestine.

AUSTRALIAN FRUITERERS DISAPPEARING.

Foreigners were taking away the livelihoods of Australian fruiterers, a witness, Stanley Cave, declared at the N.S.W. Fruit Industry Enquiry.

One retail fruiterer said that the operations of the foreigners were of such a nature that Australian fruiterers were a disappearing race. Foreigners worked longer hours and employed labor at cheaper rates. The Commission adjourned.

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GUMMOSIS DISEASE IN SOUTH AUSTRALIAN APRICOT TREES —

(Continued from Page 30).

infection proceeds most readily. There are two reasons why the saw is specially liable to contamination. In the first place the necessity for its use arises because a "gummosis" affected limb is dying back and needs removal. In the second place some sawdust is retained between the teeth of the saw and if the cut has been made through a newly infected piece of wood it may contain the active mycelium of the fungus. That "gummosis" can be disseminated by means of the pruning saw has been demonstrated, though the degree of success in dissemination depends a good deal on the conditions of the experiment.

The general method of the experiments consisted in sawing through a piece of Apricot wood known to be infected and then using it to cut off a spur or a branch from the experimental tree. In some cases the infected branch used to contaminate the saw was moistened before being sawn, the purpose being the simulation of a heavy shower of rain during pruning. One effect of this treatment was to increase the adherence of sawdust to the pruning saw.

In other experiments the saw was contaminated by wetting it with a heavy suspension of spores. For the control cuts the saw was disinfected by a brief immersion in 95 per cent. alcohol and subsequent flaming. None of the control cuts have to date developed any symptons of infection.

The pruning wounds after they were made in the 1935 experiments were all covered with tinfoil in the way already described. In the 1936 experiments uncovered duplicates of all treatments and the controls were also included.

The experiments with a contaminated saw have been carried on for 2 years. In the cases where the saw was contaminated from any single infected piece of wood the least number of inoculations made was two and these were done on different varieties. In each series of experiments two different pieces of diseased wood were used and as many as eight inoculations on four different varieties were made from the one piece of infected wood.

Results.

Table IV. below summarises the results which have been secured to date.

Table IV,—Results of inoculation with contaminated pruning saw.

Year and Place of Experiment.	No. of Inoculations.	No. Positive by 2/8/37.
1935, Hackney	10	5
1935, Blackwood	24	13
1936, Blackwood	32	3

In the 1936 experiments half the inoculations were not covered after the cuts were made and to date none of these have developed symptoms of the disease. This failure to develop may be due to the exposed cuts drying out in such a way as to prevent infection as the cuts were made on August 18 during warm, bright weather at the time that flower buds were beginning to open on many varieties. In support of this view it should be said that the proportion of covered wounds which had developed clear signs of infection by August, 1937, was considerably less than in those inoculated the previous year.

In the experiments wherein the pruning saw was contaminated by wetting it with a spore suspension the results are not yet definite. Of seven cuts so made in 1935 two have resulted in "still doubtful" infections and of 16 made in 1936 none as yet show evidence of infection.

In 1935 a similar experiment in which the secateurs were contaminated with a spore suspension was undertaken. Of 18 inoculations so made one case to date shows as a "possible infection." From the foregoing results it is clear that pruning tools, particularly the pruning saw, constitute a means whereby "gummosis" may be transmitted from an infected to a healthy tree. No actual experiments on the best means of disinfecting the saw have been undertaken yet but it seems likely that infected sawdust held between the teeth is a source of danger. Dipping the saw in a 5 per cent. solution of formalin in methylated spirits should be sufficient to disinfect the sawdust not washed away by the dipping itself.

Varietal Resistance.

No direct study of this question has been made, but in the course of making the inoculation experiments already described duplicates were always done and these were generally made on different varieties because the trees put at our disposal were part of the Apricot varietal trial block.

During the course of the work 30 different varieties, including all the main ones grown locally for commercial purposes have been inoculated. Only two of these trees (inoculated in 1936) have not so far developed one or more infections. These two failures to secure infection quite apart from the point that is still premature to draw conclusions from 1936 results are probably due to the fact that most of inoculations on these trees consisted in attempts to inoculate old pruning cuts, a method which has resulted in poor results on other varieties known to be susceptible.

Although none of the common varieties at present appear to be immune to "gummosis" when tested with the artificial system of inoculation adopted, the reactions to infection shown by some varieties suggest that they may possess a degree of resistance which may be of practical importance. In some varieties, notably "Tilton," on which a considerable number of inoculations have been made, there are indications suggesting that some of the infections which at first progressed in the usual way have been arrested. There has been no indication of such a state of affairs in "Moorpark" for instance, and it is possible that this behaviour will repay closer attention.

Control Measures.

In this report the remarks concerning control measures will be confined to a discussion of the foregoing experiments in so far as they suggest methods of control. As already stated, the Department of Agriculture has established a field experiment to test out control methods and the results obtained are to be reported upon separately by Mr. Harris, Horticultural Advisor for the Lower Northern district. It has been found that the South Australian "gummosis" disease is caused by a fungus that penetrates to the living wood through a wound. Now, the vast majority of the wounds are the result of pruning, which must be regarded as a normal and necessary operation. Possible means of control lie in a modification of pruning systems either in method or in regard to the time that is effected. The Department of Agriculture has already started an experiment devised to secure fuller information on this point.

A second suggestion arising from the knowledge that infection can take place through pruning wounds is the matter of protecting pruning wounds. The development of a satisfactory protective paint for sawcut wounds probably does not present any great difficulty, but this whole problem is made more difficult because, from the evidence of the experimental work already quoted, we know that infection may proceed through the quite small pruning cuts of 2-3 year old twigs and fruit spurs, the painting of which after pruning, is impracticable. It may be possible to secure effective protection of these cuts by some means other than by painting. Experiments testing the value of Winter spraying with Bordeaux Mixture are now in progress.

The question of treatment where once the disease is established on a tree is to be dealt with by Mr. Harris. A common fault in treatment is the failure to cut low enough to eliminate the disease from the tree. Unfortunately it is often difficult to trace the furthest spread of the disease and to do so may mean the removal of a great part of the tree, a step that many growers shrink from taking. Apart from examining the freshly cut end of a limb for signs of diseased wood we have found no reliable guide as to wher to cut. Sometimes the wood 6 inches back from a point where the whole section is dead is quite healthy, whereas in other cases streaks of infected wood extend down 36 in. and more from what appears to be the original site of infection.

Acknowledgment.

As has been stated previously, we are indebted to the Department of Agriculture, who, through the Chief Horticulturist, Mr. A. G. Strickland, placed Apricot trees at Hackney and Blackwood Experimental Orchards at our disposal.

I have also to thank Mr. Strickland, Mr. R. Fowler (Manager, Blackwood Experiment Orchard), and Mr. J. B. Harris (Horticultural Adviser), for advice during the conduct of the experiments.

My colleague, Mr. Colquhoun, has given a great deal of assistance with the numerous inoculations described here and for this and other generous help I am very grateful. Finally, thanks are due to Mr. A. D. Cocks, Technical Assistant at the Waite Institute, for the photographs illustrating this report.

Summary.

Attention is drawn to an economically important "gummosis" disease affecting Apricot trees grown in Sth. Australia. In its early stages the disease induces extensive gum formation and later a progressive dieback of the limbs. Ultimately the whole tree usually dies.

Other symptoms of the disease are described in some detail. The disease chiefly affects Apricots—odd cases of a similar disease have been observed in Plums and Peaches.

Associated with the disease is a fungus whose precise systematic position has not yet been defined.

A large number of inoculation experiments have been performed which have demonstrated:—

(a) That a fungus isolable from the wood and bark of affected trees is the cause of the disease and that it can be induced either by means of the mycelium or a spore suspension of this fungus.

(b) That a pruning cut which exposes a large section of wood provides a good site for infection. Infection can also proceed through deep bark wounds or the cut ends of smaller branches, but with less certainty. No infections have resulted from the inoculation of uninjured bark.

The question of the means whereby the disease may be transmitted from tree to tree has been considered. Possibly there are features in the life cycle of the fungus which have not yet been discovered, but definite evidence showing that the disease may be transmitted by the pruning saw is brought forward.

No evidence of immunity from this disease among the common Apricot varieties has been found. However, certain varieties, judging from the manner of their reaction to infection may possess a degree of resistance of economic value.

A short account concerning the principle of control which emerge from the above investigations is given. Attention is drawn to work dealing with this phase of the problem which will be reported upon separately by Mr. Harris, of the Department of Agriculture.

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Fruit Crop Prospects in All States

Victorian Crop Prospects

Mr. J. L. Provan, B.Ag.Sc., Senior Horticultural Instructor, Department of Agriculture, writes as follows under date October 3:—

It is rather early to give an accurate forecast of the fruit crop in the coming season, but, from reports received from our field officers, I am sending you the following information.

Apples: Irregular throughout State except Horsham district, where, however, there may be a water shortage for irrigation purposes late in the Summer. **Pears:** Prospects of a good crop in all districts, especially Williams and Packhams. **Peaches:** Heavy crop throughout the State. **Plums:** Heavy setting in all districts. **Apricots:** Only a 40-50 per cent. crop in all districts except Horsham, where a good crop has set. **Oranges:** Late Valencia crop appears to be light. **Lemons:** Good crops are general but some loss was caused by frost. **Berry fruits** give promise of a good crop.

QUANTONG.

A report from the Quantong (Horsham) district states that Apricots and Peaches (early) have set heavily. Plums are blossoming well. Pears, medium to heavy, Quinces and Apples, light to heavy, Tomatoes and small stuff will probably be considerably curtailed should there be no more rain.

The weather has been exceptionally dry for months. Some Apricot growers state these are spongy and lack foliage, some fear stone fruits will drop on account of dryness, others fear settings will drop should sudden heavy rain come. It is also likely that frosts will be prevalent, with continued dry weather. Growers are in doubt as to what will happen should a sudden heavy rain come.

Water storages are exceptionally low, causing a small migration of Tomato growers to the banks of the Wimmera, which is at present a chain of holes. The Water Commission has notified growers that they may use only two-thirds of the amount of water they used last season for irrigation purposes, providing no more rain comes to replenish storages. On present outlook it appears that most block holders will have very little water to use on vegetables, etc.—S. Jost.

All varieties are much later than last year in the Red Hill district. Jonathan buds are very patchy; in some orchards they are very light, but on the whole it is expected to be a medium crop. Most cooking Apples, such as Granny Smith, Stewarts, etc., have a good showing of buds. There is also a good showing of Pears, such as Packhams, which are out in flower. Orchardists are busy with the first Bordeaux spray, which should be on in a week or so.—E. H. Jarman, Devon Orchards, Red Hill.

BACCHUS MARSH.

Information from Mr. Jas. Cowan, Bacchus Marsh, states that Apple crops in general are going to be light, and Jonathans particularly light. Prospects for other varieties are:—Dunn's, fair; Stewarts, good; Granny Smith, good; Statesman, good; Romes, good; Yates, fair; Sturmer, poor. Other varieties, poor.

Pears, fair to good.

Plums, some sorts good and some poor. Apricots, poor; frost destroyed them.

Cherries, light.

The report added that the district was very dry, and as the water supply was very low, the prospects were not encouraging.

QUEENSLAND'S FRUIT CROP PROSPECTS.

Apples May be Light at Stanthorpe.

The Director of Fruit Culture, Dept. of Agriculture, Brisbane (Mr. H. Barnes), writes under date September 27: "Indications are that heavy crops will be borne with all crops of the different kinds of fruit in Queensland during the coming season. Splendid Winter rains have been experienced and early Spring falls have done much to ensure a good blossoming.

Citrus: In the Gayndah, Howard and Coastal districts, Orange, Mandarin and Grapefruit trees are in very heavy blossom, whilst big crops of young Lemons which will be marketed from December to February are hanging in the Gayndah district.

Bananas: Production of Bananas is expected to increase as a consequence of the good season. It is also anticipated that plantings during the Spring season will approximate about 4,000 acres, or 25 per cent. more than last year.

Pineapples: The last of the Winter Pineapple crop is now being harvested and there is every indication that a record figure will be reached. The plants are also flowering well for the Summer crop, and a still greater production is expected for next year.

Other fruits including Avocados, Mangos, Custard Apples and Queensland nuts are also in heavy blossom and likely to set good crops of fruit.

Apples, Peaches, Plums, Apricots and Grapes: Weather conditions in the Stanthorpe district have created favorable soil conditions for a record year for deciduous fruitgrowers. Reports to hand to date are as yet of a general nature, but forecast that the harvest will be a very big one.

FRUIT CROPS IN SOUTH AUSTRALIA.

The Chief Horticulturist (Mr. A. G. Strickland) reports that South Australian fruit crops in 1937-38 were generally heavy, the production of both Oranges and Apricots constituting records; 802,255 bushels of Oranges, and 511,452 bushels of Apricots were harvested. The Apple harvest of 1,275,486 bushels is second only to the 1927-28 crop of 1,352,264 bushels.

Prospects for the coming season are for medium to good crops of most fruits.

From the present appearance of Apple buds throughout the State, the Apple crop should be of approximately the same dimensions as in 1936-37. Although this season is the "off" year, the variation in volume of crop, from "off" to "on" year has not been nearly so marked in South Australia in recent seasons. In parts of one important district, frosts which occurred in the Spring of 1933 have altered the biennial sequence, and in the coming season these areas will experience a full crop season. As to varieties, Jonathan and Cleopatra promise only light to medium crops, whilst Rome Beauties generally will be heavier.

In the case of Pears, the appearance of blossom buds is patchy, and light to medium crops are expected.

Stone fruits generally promise good crops, although in the case of Peaches and Nectarines there has been in some districts an unusually noticeable shed of unopened buds.

Almonds have finished flowering, and in most districts appear to have set well.

The harvesting of citrus fruits is still proceeding, and indications are that the State production has been well up to average.

Gumeracha (1/10/1938)—Re crop prospects:—

The outlook for the coming season's crop is on the whole good; many orchards are showing for heavy to very heavy blossoming, while others that carried a good crop last season report a good "off season" showing equal to a 50 per cent. crop; this applies particularly to export varieties of Apples.

Pears, chiefly W.B.C., are showing for a good average crop; other varieties are grown only to a very limited extent, but are showing well for a full crop.

Plums are showing for a medium to heavy crop.

Peaches and Apricots: These are only grown to a very limited extent; those that are have bloomed well, but two heavy frosts last week leave it very problematical whether any fruit will survive; it is as yet too early to be certain what the damage really is. —J. B. Randell.

WESTERN AUSTRALIA.

Indications of a Big Apple Crop.

The indications this season for the fruit crop in Western Australia are exceptionally good. All kinds and varieties show an abundance of fruit buds, and Apples particularly are breaking early. As an indication of the promise of a heavy crop of Apples I may mention that the young wood that was made last year, and which usually carries only leaf buds, is this year studded with fruit buds.

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FRUIT CROP PROSPECTS (Cont.).

I have always recognised that when "Jonathans," particularly young trees, behave in this manner it is a sure sign of heavy crops, but this season "Granny Smiths" and "Cleopatras" are budding in a similar manner.

GEO. W. WICKENS,
W.A. Superintendent of Horticulture.

WEST AUSTRALIA.

Mt. Barker (30/9/38).—The trees are only just coming out in flower, but from all reports the flowers are healthy, with good big buds. At the present time there is no sign of thrips, and it is anticipated that if thrips do come it will not hurt the flowering and the setting of the crop.

From indications it would appear that we are in for a big crop of all varieties.

It is too early yet to give definite results.

The early Apricots have set well and the other stone fruit seem as if they will set well also.—B. Hickling.

N.S.W. CROP PROSPECTS.

Orange.

Cherries: E. Lyons, St. Margarets, and most other varieties, show good to heavy crops. Florence and Napoleons are patchy, showing on the whole medium to good crops.

Plums: Angelina, Ponds, Grand Duke and Presidents, the principal varieties in this district are all showing good crops.

Pears: Williams, medium to good crop; Packhams, medium; other varieties good to heavy.

Apples: Grannies, Jonathan, Delicious and Romes, the principal varieties good to heavy crops; other varieties heavy.

Weather conditions are favorable to a good setting, and indications are that the season will be dry. Orchards ploughed early have plenty of moisture and occasional showers will keep them going. Where ploughing has been delayed, the evaporation was severe and unless good rains fall, it will be a big strain on the trees resulting in small fruit and a light showing next season.—W. E. West.

AMERICAN APPLE CROP.

Generally Under Average; Normal in Northwest.

Latest advices (August 6) indicate that whereas the Apple crop in U.S.A. will be under the average this year, the crop in the northwest will be about the same as it was last year. This is the area from which comes most of the Apples that compete with Australia and New Zealand.

HANDWRITING COMPETITION.

£18/10/- in Prizes.

A HANDWRITING competition is being conducted by the Australian Apple and Pear Council. £18/10/- is offered in prizes. There will be separate competitions for girls and boys—under 10, under 14, and under 17. Competitors may use either right or left hand. The wording is as follows—

"Apples after every meal,
Eat the lot, both flesh and peel,
'Nature's Toothbrush' they are styled,
Excellent for man and child.
Tone the nerves and cleanse the blood,
Best of medicine and food."

Specimens should be written in blue-black ink on ordinary opaque ruled exercise-book paper or foolscap, and not between double lines. The following particulars are required:—Christian and surname in full, address, school, age on January 1, and hand (left or right). It is important that the name, address and school be written on the back of the specimen and the sex (girl or boy), age, and hand on the front. Every specimen must be certified by a head teacher, clergyman or Justice of the Peace.

All entries must reach the Secretary, Australian Apple and Pear Council, 528 Collins-street, Melbourne, Victoria, by October 29, 1938. There is no entrance fee. If any further information is needed, enquirers should send stamped addressed envelope to the Apple and Pear Council's Secretary. The competition is Australian-wide in character.

Market Notes and Prices

FRUIT PRICES IN THE SYDNEY MARKET.

Survey for the Period August 25 to September 25, 1938.

THE period under review has been one in which values of Apples have steadily improved, supplies from Tasmania varying from 24,000 to 29,000 cases per week, and when the smaller quantity was available values perceptibly hardened. The prominent types of Apples have changed from Scarlet, Rome Beauty and Cleopatra, to Democrat, Sturmer Pippin and Crofton, other varieties being Delicious, Geeveston Fanny and French Crab, together with a few other oddments—even a few Jonathans still appearing. Sturmer Pippin have never been popular, but the scarcity of good quality red Apples has been in their favor, and the average values have improved.

Arrivals of N.S.W. Apples have not been very noticeable, but there have been steady releases from cool store from most late districts. There has been no improvement in the value of Granny Smiths, the popular selling price being 10/- to 12/-, with extra good quality fruit a little higher, and Delicious, some vendors report, have been inclined to sell less freely at 15/- and 16/-. A few Buncombe have been available and Democrat have been more noticeable latterly.

Prices: Apples (Fancy and Good): Buncombe (N.S.W.), 7/- to 10/- per bush.; Crofton (Tas.), 7/- to 10/-, fancy 11/-; Cleo. (Tas.), 7/- to 10/-; Del. (N.S.W.), 9/- to 14/-, extra fancy to 15/-. Del. (Tas.), 7/- to 12/-; Demo., Tas. to 8/6; (N.S.W.), 6/- to 9/-; French Crab. (Tas.), 6/- to 8/-, green to 9/-; Geeveston Fanny (Tas.), 6/ to 8/-; Granny Smith (Tas. to 11/-), N.S.W., 7/- to 13/-, shipping higher, extra fancy 14/-; Romes (Tas. to 9/-), N.S.W., 7/- to 10/-, few 11/-; Scarlets (Tas.), 5/6 to 8/6; Sturmer (Tas.), 5/6 to 7/6; Statesman (N.S.W.), 7/- to 9/-; Yates, 7/- to 10/-. Extra fancy and shipping higher; "D" grade lower.

Pears: These have appeared in steadily reducing quantities, the chief supply coming from Victoria. Adverse comments were made regarding the quality of some of this late fruit, and buyers on a number of occasions complained of the losses they sustained. A few Packham's Triumph and Josephine are still being released from N.S.W. districts, the usual proportion of breakdown evidenced late in the year being apparent. Prices: Pears—Glou Morceau (Tas.), 5/- to 8/- per bush.; Josephine (Vic.), 5/- to 8/-, few higher; Jos. (N.S.W. and Tas.), 7/- to 11/-, extra fancy to 13/-; Packhams (N.S.W., Vic. and Tas.), 7/- to 12/-, few 13/-; Winter Cole (N.S.W., Tas. and Vic.), 5/- to 12/-; Winter Nelis (N.S.W., Tas., and Vic.), 7/- to 12/-. Extra fancy and shipping higher, "D" grade lower.

Bananas: A preponderance of small sizes has again made the realisation of satisfactory prices very difficult. Weekly arrivals have varied from approximately 9,000 to 11,000 tropical cases per week, almost a third of this fruit coming from Queensland. Present prices for regulation graded first quality fruit, according to the Banana Marketing Board of New South Wales are 12/- to 20/-.

Citrus Fruits.

Grapefruit: The chief supply has been from local sources and quick sale has been effected where possible. Supplies have not been as excessive as in some years, and the willingness of agents to clear stocks has prevented any accumulation. Most arrivals have been Marsh Seedless and the

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Wheeney type appears to be coming more popular. Inland supplies have not been very great. A few special quality have come forward from Narromine and from the Kurrajong district, realising to 14/- and 15/-. Most sales, however, have been as follows:—Local, 3/- to 6/-, few 8/- to 10/- per bushel . Wheeney, 5/- to 10/-. Inland, 5/- to 6/-, few higher.

Lemons: These increased in supply following the rain experienced at the end of August and sale for retail purposes became very difficult. Processors negotiated direct with growers for the supply of fruit for juice and peel purposes. Prices: Lemons, N.S.W. Special and Standard: Local counts 125 to 216, 2/6 to 4/-, few 6/- per bushel; smaller, 2/- to 4/- per bushel; plain grade unsaleable. Inland, 5/- to 6/-, few 7/-.

Oranges (Navels): The heavy rain experienced at the end of August played havoc with fruit, having advanced maturity, with the result that the Sydney market, immediately picking was recommenced, received heavy supplies. Some loss of fruit occurred on the orchards, and some wastage was apparent in the markets also. Values improved as supplies become less plentiful, but retailers declined to pay very high values owing to the quick breakdown that was experienced. It was apparent that most coastal and metropolian Navels are now marketed and that the marketing of inland fruit is well advanced. Average values have been at 6/- to 7/-, with special quality fruit to 8/-, and some outstanding brands at 9/- to 11/-. Prices in detail are estimated as follows:—Navels, N.S.W.: Counts 72 to 96, local, 6/- to 7/-, special 8/-, inland 6/- to 7/-, special 8/-; counts 113 to 150, local 6/6 to 7/6, special 8/, few 9/-, inland, 6/- to 7/6, special 8/-; counts 163 to 175, local 5/6 to 7/-, inland 5/6 to 6/-, special 8/-; counts 188 to 216, local, 5/- to 6/6, inland 5/6 to 7/-. Few special inland brands to 11/-. Inland two bushel crates, 11/- to 13/-, few 14/-. Victorian: 5/- to 7/-.

Valencias: The first to appear were windfalls as a result of the week of rain experienced, and it is doubtful whether the prices realised for these windfalls paid the cost of marketing. It is apparent that the average Valencia is this season very small in size, most arrivals on the market being from count 216 to 150 per bushel. Most sales would range from 4/- to 6/-, with large sized special quality fruit to 7/-, while windfalls of small size are around 2/- per bushel.

Other Oranges: These have been more plentiful lately, prices varying from 3/- to 5/-, with a few to 6/- per bushel.

Mandarins: Small sized and puffy fruit has been a problem for vendors and these types of fruit have accumulated on occasions. Supplies are becoming lighter and some sales of special quality firm fruit are around 7/- to 9/- per bushel.

Loquats: These appeared about the middle of September, special quality realising to 10/- per half case, with average sales around 6/- and inferior poorly packed fruit from 2/-.

Passionfruit: This fruit has been scarce during the past week and values improved to 12/- for special quality, whereas 8/- and 9/- had been the top price most of the month. Medium and poor quality fruit has been under offer at almost any price.

Papaws: This Queensland product has not yet attained the popularity that exists during the Summer months, and values have varied considerably owing to the difficulty of satisfactorily ripening the fruit. Average sales have been from 8/- to 10/- with a few sales to 11/-, but on occasions poor quality fruit has been cleared at from 4/- per tropical case.

Pineapples: These have been fairly plentiful and prices have seldom varied from the range of 6/- to 8/-.

Strawberries: The Queensland crop is now near the end of its season and breakdown in the fruit is more noticeable. A satisfactory season, however, appears to have been experienced although the Sydney Market has at times been loaded to the utmost. Prices: 1/6 to 4/- per tray; 5/- to 12/- per dozen boxes.

Tomatoes: The week of rain experienced at the end of August reduced demand for Tomatoes just at the time when N.S.W. glasshouse were becoming more plentiful. Queensland supplies also jumped to 24,561 half cases at the same period, and low values immediately resulted. Little improvement was experienced until the week commencing September 12, when the Queensland growers forwarded to local sauce factories rather than send to Sydney at a loss. Sydney values of glasshouse and repacked fruit immediately improved, only easing a little on the 16th, when it became known that the Queensland consignment arriving on the 19th would comprise 34,000 half bushel cases. Prices: Tomatoes — West Australian, 4/- to 6/- half bush.; Q'land., 4/- to 6/-, few higher, inferior and over-ripe lower per half bushel; N.S.W., glasshouse 8/ to 13/-, hothouse to 15/- half bush.; Repacked, 8/- to 11/- half bush.—L. T. Pearce, Market Representative, Fruitgrowers' Federation of N.S.W.

WEST AUSTRALIA.

Perth (26/9/39).—Apples: Dunn's dumps 7/- to 9/6 (fancy), 10/- (ex. fancy); R.B. 8/- to 9/6 (fancy); Yates 8/6 to 12/6 (fancy), 13/- (ex. fancy); G. Smith 9/- to 11/- (fancy), 10/6 to 12/- (ex. fancy); Nickajack 9/- to 10/6 (fancy), 11/- (ex. fancy); Doherty 8/- to 10/9 (fancy), 10/9 (ex. fancy); Del. 12/- to 13/- (ex. fancy); Rokewood 7/- to 9/6 (fancy), 9/6 (ex. fancy); Demo., 8/6 to 10/- (fancy). Citrus: Oranges, navel, flats 3/- to 7/- (special to 8/-); dumps 4/- to 8/6 (special to 11/6); Val. flats, 2/6 to 4/9; dumps 3/6 to 6/6 (special to 8/-); Lemons, flats, 1/- to 4/- (special to 5/-); Mandarins, flats, 3/- to 8/6; Grapefruit, dumps, 6/ to 11/. Other lines: Loquats, 3/ to 9/6; Tomatoes, ex. Geraldton, 2/- to 9/- (special to 12/-); Passionfruit, quarter-bushel, 5/- to 8/-.

VICTORIA.

Melbourne (3/10/38): Wholesale Fruit Merchants' Association prices: Per case: Apples, eating, 4/-, 8/-, choice higher; cooking, 2/6, 5/-, few higher. Bananas, double case, green, 8/-, 14/-. Celery, 6/-, 10/-, few higher. Cucumbers, 14/-, 18/-. Grapefruit, 6/-, 10/-, choice higher. Lemons, 4/-, 7/-, choice higher. Mandarins, 5/-, 9/-, choice higher. Oranges, 5/-, 9/-, few higher. Passionfruit, half case, 6/-, 11/-, few higher. Papaws, 6/-, 8/-, few higher. Pineapples, 6/-, 8/-, choice higher. Pears, 4/-, 8/-, few higher. Tomatoes, West Australian, half case, 6/-, 12/-, choice higher; South Australian, best, ripe, 20/-, 22/-, few higher, green lower.

The Federal Citrus Council of Australia reports:—Oranges in moderately good demand: Lemons slow. Sales: Navel Oranges, average standards, 60-68, 4/-, 4/6; 75-84, 5/-, 5/6; 96-112, 6/-, 6/6; 126-182, 7/-, 7/6; good standards, 4/6, 8/-, few 8/6; selected, 5/6, 9/6, few 10/-; specially selected, 6/-, 10/-, few 11/-. Lemons, average standards, 225-248, 5/-, few 5/6, best counts; selected, 5/-, 6/-, few 7/-, best counts. Grapefruit, average standards, 38-53, 4/6, 6/-; 60-84, 6/6, 7/-; good standards, 5/-, 8/-; selected, 6/-, 9/-; specially selected, 7/-, 11/-, few 8/-, 12/-. Mandarins, standard Emperors, nominally 7/-, 8/-, best counts; selected and specially selected higher. Commons, average standards, 6/-, best counts, few 6/6; selected standards, 7/-, best counts, few specially selected higher. Poorman's and Sevilles, average standard, 5/-, best counts, few 6/-, few selected 7/-; small sizes, nominal. Bloods, selected 8/-, best counts.

QUEENSLAND.

Brisbane (20/9/38): Messrs. Clark & Jesser report as follow: Since our last report the Apple and Pear market has been very steady, and there has been very little alteration in values.

Ruling prices at present are, Apples: Jon., 2½, 2¾, 10/- to 10/6, smaller sizes 7/- to 9/-; Del., 10/- to 11/-; R.B., 8/- to 9/-; other varieties of colored Apples, 8/- to 9/-; Sturmers, 6/6 to 7/6; G. Smiths, 13/- to 14/-. Pears: W.C. and Jos., 13/- to 15/-, very small sizes in Pears in small demand. Oranges, Vals., 5/6 to 6/6, small sizes 4/- to 5/-; Navels, 9/- to 10/-. Mandarins: Muscio's Ellendales and Emperors, large 9/- to 11/-, medium 7/- to 8/-, small 4/- to 5/-. Lemons, 8/- to 10/-. Grapefruit, 5/- to 6/-. Passionfruit, 10/- to 11/-. Pineapples: Roughs, 6/- to 7/- per case; Smooths, 4/- to 5/-. Papaws, 2/6 to 3/- dump case. Bananas, green 10/- to 12/-. Tomatoes, 6/- to 7/-.

SOUTH AUSTRALIA.

Adelaide (28/9/38).—The South Australian Fruitgrowers' and Market Gardeners' Association report fruit prices as follows:—Apples: Del. 8/- case, Granny Smith 8/-, Jons., 6/-, Cleos., 6/-, Romes 6/-, Londons 5/-, Statesman 6/, Bananas 17/- to 19/-; Lemons 3/- to 4/-; Oranges, common, 3/- to 4/-; do., Mandarin 8/- to 10/-, do, navel 5/- to 6/-; Grapefruit, 6/- to 7/- case; Passionfruit, 17/- half case; Pineapples, 12/- to 13/- case; (cases extra).

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Poultry Notes

WORMS IN POULTRY.

How do worms cause trouble in poultry?

1. They live on the food that belongs to the fowl.

2. They liberate poisonous products from their bodies, which are injurious to poultry.

3. They set up a constant irritation in the intestines.

4. They lower the vitality of the infected birds and leave them open to other ailments.

5. The greatest danger is probably done to young stock. They swallow larger numbers of worm eggs, and the young worms, on hatching out, bore into the intestinal wall, destroying digestive glands, or causing an inflammation that retards digestion.

The bird affected by worms will pass hundreds of worm eggs out with the droppings. After incubating in the soil or droppings, they are picked up by other birds. The eggs hatch and liberate worms, which partially insert themselves into the intestinal mucus membrane. They remain attached to the lining of the intestines for a while, then drop off and mature, lying free in the intestines.

A reliable treatment for the elimination of worms is to give Kerol in the daily mash; 1½ ozs. added to 100 lb., or if a wet mash be given, 1 teaspoonful is added to the water used to moisten the food for every 40 adult birds or 50 young or old. This given regularly, not only eliminates the worms, but young chickens so fed are said to grow quicker and larger.

The soil in the yards serves as an incubator for the worm eggs deposited in the droppings of affected birds. To secure a large measure of immunity from worms, wet spots in the yard should be done away with, and the pens and yards sprayed regularly.

MALE BIRDS FOR BREEDING.

The Question of Which to Reserve.

A start should be made during September to market the early hatched cockerels, and any chickens hatched before the middle of June, if well reared, should realise highly payable prices, but where it is desired to retain cockerels for breeding purposes the mistake should not be made of marketing the majority of these early birds, leaving only a few from which to make selections later on. The best course (writes the Poultry Expert of the N.S.W. Department of Agriculture) is to market only those which are showing definite faults, such as deformities, including crooked breast bone, those with incorrect eye color, or very faulty combs, etc., although as far as combs are concerned the birds should not be rejected at this age merely on account of the comb not standing upright, as it frequently occurs that such combs will straighten up later on. There need not be any hesitation, however, in disposing of those showing abnormal comb development, which is usually associated with precocity. This, of course, refers to chickens which have been reared in the open and not kept confined, as in batteries.

Beginners often make the mistake of reserving showy little birds which strut about the yard, with the mistaken idea that they will make the best breeders. Such birds almost invariably mature too quickly and do not attain a desirable standard of physique for breeding stock. The more suitable birds are those which develop larger frames, but are slower in reaching maturity.

WASTAGE IN EGGS.

Investigation by Science Council.

MICROBES attack eggs, causing deterioration in quality during long storage, and the services of that versatile body, the Council for Scientific and Industrial Research, have been enlisted to find a solution of the problem.

The Minister in charge of scientific research, Mr. Casey, stated recently that arrangements had been made between the Council for Scientific and Industrial Research and the Egg Producers' Council under which the C.S.I.R. would undertake investigations into the nature and cause of and remedial measures for wastage in eggs due to microbial attack.

The Egg Council, he said, had agreed to find half the cost of the investigations, which it is expected would be spread over a period of five years. This was in accord with the Government's views that these directly interested in any particular line of research should contribute substantially towards the cost of the research.

London Complaints.

"Complaints have been received from London during the past two or three years about the quality of our eggs," said Mr. Casey. "In some quarters it is thought that deterioration is due to the washing of the eggs, possibly under not very hygienic conditions, before packing for shipment. This will be one of the avenues of investigation.

"Australia's export trade in eggs has assumed some importance," added Mr. Casey. "In 1928-29 the value of exports was £219,000, compared with nearly £1,000,000 for 1936-37."

TURKEY EGGS.

There is no material difference in the treatment of turkey eggs under incubation from that required for hen eggs. A tendency to rather lower than higher temperatures is favored by some turkey breeders. Run the incubator according to the maker's instructions in regard to moisture. Sprinkling the eggs at any stage is, however, inadvisable, and quite unnecessary. A main point is to have the eggs not more than a week old, and if the eggs can be set under hens (either turkey or others) for a week or ten days the hatching will be more successful.

WHOLESALE HATCHING.

The following is a description of a modern hatching establishment, with its all-electric incubator, with a capacity of 16,000 eggs, and hatching out about 100,000 chicks in a season. By automatic heating the thermometer is kept over 100 degrees, and a hydrostat helps to keep the humidity at 60 degrees.

The machine is heated with filaments, and revolving fans keep the air circulating evenly throughout the entire area. After 18 days in the machine the eggs are placed in a separate hatcher until the chickens burst the shells.

In the modern brooder the chickens are not handled at all, the floor being composed of grids allowing the refuse to fall through underneath from whence it can be cleaned. After being in this brooder a fortnight the chicks are transferred to a larger brooder with a yard attached. Collapsible shutters can be let down on cold nights so as to give sufficient warmth. For big brooders a magazine can be attached for burning briquettes, constant attendance being unnecessary, as the briquettes fall automatically o the fire as required.

Trap nests are used on such farms, and records taken of number of eggs.

White Leghorns and Australorps are the two main breeds used to-day. The latter are not so susceptible to cold spells as the Leghorns, but the Leghorns are recognised to be better ayers in season.

When fire broke out during a performance at a theatre, a member of the audience went on the stage and sang a few songs. The building was cleared in an amazingly short space of time.

The Pig Pen

YARDS FOR PIGS.

Requirements for Health.

The weekly circular issued by the N.S.W. Department of Agriculture states that yards for pigs should be sufficiently large to enable them to have plenty of exercise. Except in the final period of fattening, when the exercise is restricted, the animals should have a free run. Pigs are far more healthy when grazed in paddocks than when enclosed in pens. Where it is not convenient to run the pigs over large areas, and they are confined to small yards, a system of alternate yards gives good results.

Under this system, when one yard becomes foul from constant use by the pigs it can be ploughed or dug up, limed, and a green or root crop sown, the pigs being transferred to another yard. When the crop is up the pigs may be returned to that yard and have the benefit of the food, while the yard just vacated can then be treated in a similar manner. This serves the double purpose of cleansing and sweetening the soil and providing some green food. When the same yards are used for long periods without being rested, the soil becomes a source of infection for various microbic and parasitic diseases.

When pigs are grazed over large areas a portable pig-house, built on slides, is very convenient.

COLDS IN PIGS.

AT THIS TIME of the year a cough might be noticed in some of the pigs. There are several possible causes which have to be diagnosed and treated accordingly. Sometimes a discharge from the nose will be seen. In this case it is probable only a slight head cold caught from wet litter or a draughty house. Such pigs should be isolated to prevent a spread to the others through eating or drinking from the same trough. Good dry bedding should be provided and draughts stopped and a good dose of castor oil will probably effect a cure. If the cough is loose it must not be neglected or it will develop into pleurisy or pneumonia.

If the pig shows sore eyes with a yellow discharge, bathe the eyes twice daily with a teaspoonful of boracic acid to a pint of luke-warm water and follow by applying a few drops of lotion made from 10 grains zinc sulphate to 2 oz. of water.

BRAN FOR PIGS.

Although bran is an excellent feed for brood sows, because it gives a good laxative action and also because of its bulk, it is not a fattening food and therefore should not be overdone for stock preparing for the market. Pollard is much better for fattening and is wisely more popularly fed for this purpose.

SPECIAL NOTICE TO FRUITGROWERS

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THINNING OF FRUIT

Treatment of Peaches and Plums

FRUIT TREES often set such heavy crops that they are unable to develop the fruit to satisfactory sizes. This occurs even when the trees have received adequate cultural attention and have had their fruiting wood considerably reduced by pruning.

The tendency to overcrop, writes a N.S.W. Departmental Fruit Inspector, is not general, applying to all fruits or even to all varieties of any one type of fruit, but is found to be a varietal characteristic. In the coastal districts of N.S.W. most of the early varieties of Peaches and the majority of the Plum varieties, too, show a marked tendency towards over-cropping, with the result that unless steps are taken to reduce the crop by "thinning," fruit sizes will be small.

The arguments usually advanced against thinning are:—

(a) That the crop is reduced too much.

(b) That the work involved is too costly.

So far as reduction of crop is concerned, it will be found in most cases that the reduction is only in fruit numbers, and not in the number of cases produced, due to the increased sizes of the fruit remaining.

That the work is too costly can best be answered by pointing out that it is cheaper to pick the small, immature fruits and drop them to the ground, where they require no further attention, than it is to harvest innumerable undersized fruits which have to be eased, carted, sorted, and packed, if marketable—and destroyed if not marketable, which, taking into consideration the fact that lower prices are received for the small sizes, more than offsets the small extra cost of thinning.

In support of thinning it may be pointed out that:—

(1) Fruit of large size is cheaper to handle than is small fruit, requiring less labor per case to pick and pack.

(2) Larger sizes sell more freely and realise higher prices than do small Peaches and Plums.

(3) There will be a much smaller proportion of damaged and malformed fruits, owing to such fruits having been removed in thinning.

(4) Transport charges are the same for fruit of good size as for small fruit, yet the former returns more than the latter.

(5) Where thinning is adequately and efficiently carried out, some minimising of a biennial cropping habit can be expected.

(6) Losses from diseases and pests are usually less where fruit is not crowded together, but has plenty of air space surrounding each fruit. Thinning is recommended as a means of checking brown rot—that scourge of stone fruit growers in coastal districts.

The manager of a seaside hotel complains that many people cook their own meals on the beach. No doubt; on a fine day, hundreds of joints can be seen browning nicely in the heat of the sun.

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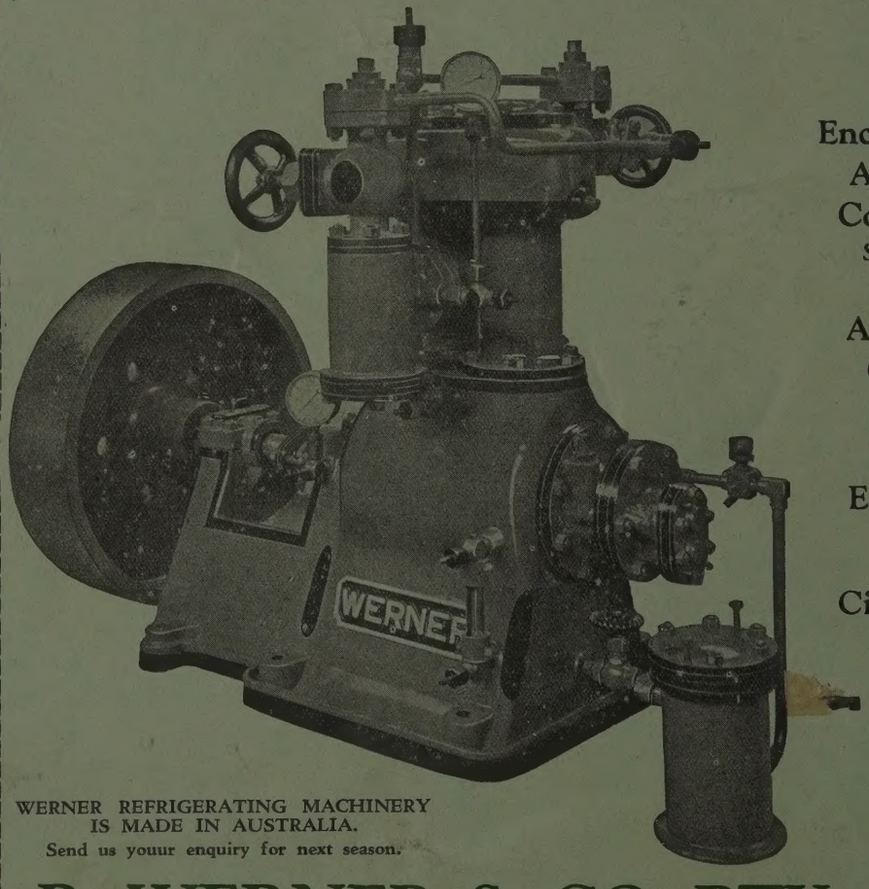

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EMPIRE AGRICULTURE.

New Arrangements Inevitable.

Speaking in the House of Commons during a debate on British agriculture, Mr. Cedric Drewe (Conservative), who attended the Empire conference in Sydney, made a striking speech. He said that there was a real policy in the conference resolutions, and he hoped the Government would implement them. The conference was unique, and might be historic. **He referred to the shock the Dominion producers received on learning that more persons were employed in agriculture in Britain than in Canada and New Zealand, or even Australia and New Zealand combined.** Mr. Drewe added: "I think that they honestly believed that proximity alone gave us first place in our own markets."

Mr. Drewe said that the Dominions now realised that there were other factors, and they were willing to give Britain unqualified first place in their own market. He described how it was explained to the conference that the expansion of agriculture in Britain was necesary as a measure of defence. Every delegate from Australia, New Zealand and Canada had agreed that it was Britain's right and her duty.

Dominion Co-operation.

"The Dominions agreed that this might mean some restriction of British imports. They further realised that the British Government's fertility campaign now in full swing must itself result in some increased production of foodstuffs, and they were quite willing to meet us," Mr. Drewe said. He also elaborated the argument that the solution lay in opening up fresh markets, and suggested that Britain and the Empire might be regarded as one unit for bargaining with foreign countries, thus providing such a powerful weapon as would enable them to force a way into markets now closed to Britain and the Dominions. He believed it would be possible also, by adoption of the Sydney policy to get the Dominions willing to assent to a system of the regulation of the British markets, giving the maximum facilities to the Dominions and allowing for British expansion.

FRUIT IS A NECESSITY.

Economist's Evidence.

Mr. J. G. Crawford, economist to the Rural Bank of N.S.W., submitted to the Fruit Inquiry Commission a report on purchasing power as it affected the price of fruit.

He said that prices for fruit would be more stable and the demand less elastic if the public could be educated to regard fruit as a necessity. Such an attitude to fruit might result from publicity showing its nutritive value.

In quoting income and citrus market figures for the years from 1928 to 1937, Mr. Crawford said that items such as fruit, which were regarded as luxuries, had to bear a greater loss when the incomes of individuals and companies were low.

The extent of fluctuations in citrus prices was linked to changes in average wages, he added. Since 1931-32 average wages had not risen greatly, but the increased numbers of people in work had enabled citrus prices to recover to within 22 per cent. of the 1928-29 level. Although the recovery had not been as compete as might have been expected in view of increased employment, individual money wages were not back to pre-depression levels. Also, some of the increased national income seemed to have been diverted to new investments rather than spent on the consumption of foods.

Printed by the Horticultural Press Pty. Ltd. for the Fruit World Pty. Ltd., 78a Victoria St., Melbourne. Phones: F 2656. F 2657: and at 439 Kent St., Sydney.